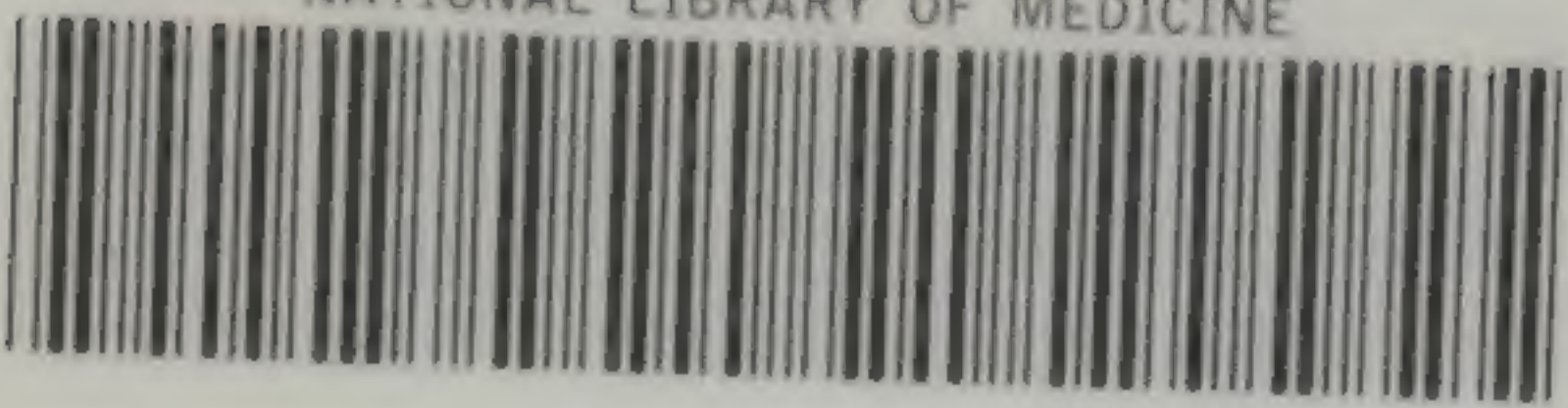






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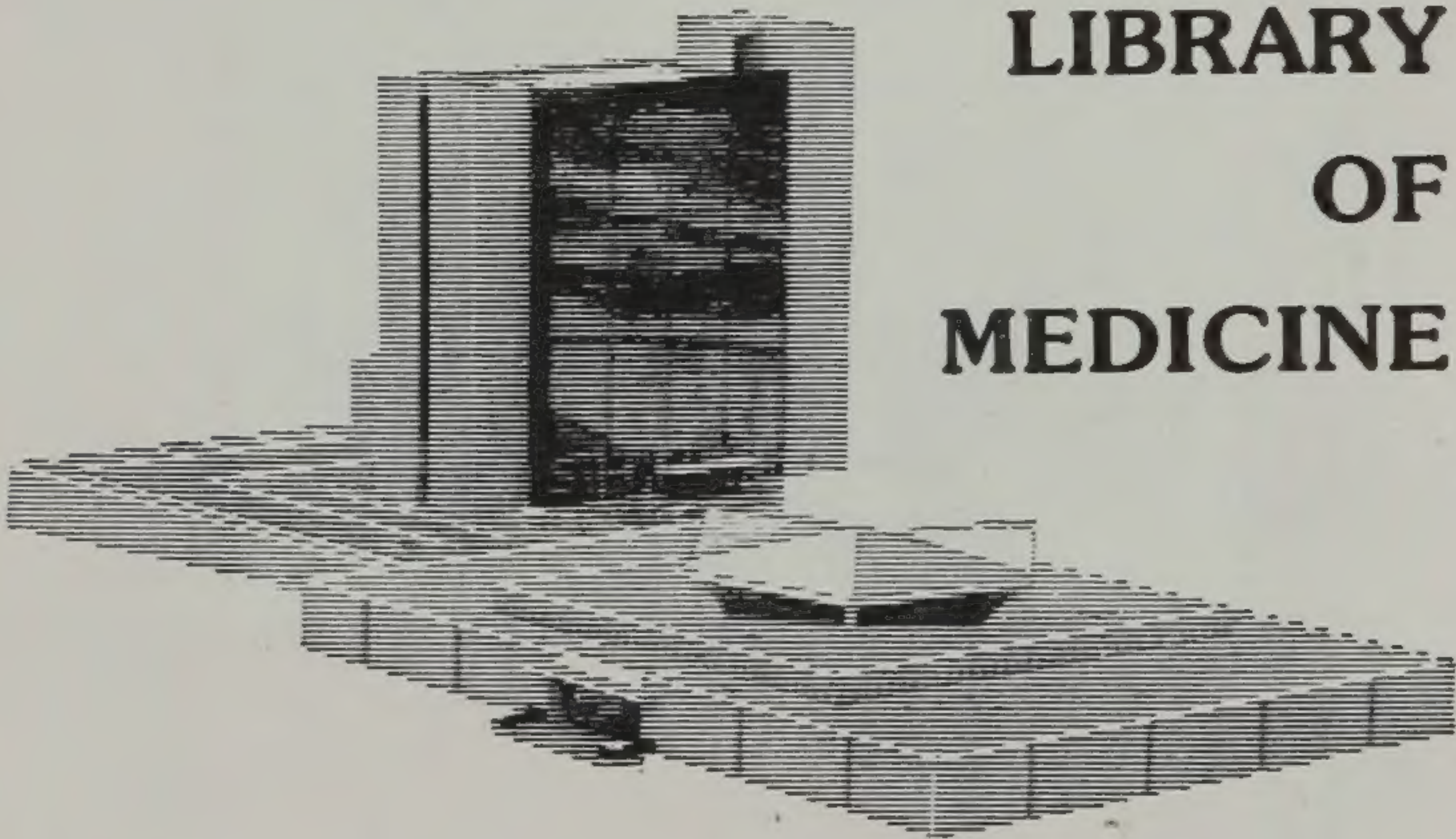
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A

CLINICAL MANUAL

OF

SKIN DISEASES.

WITH SPECIAL REFERENCE TO

DIAGNOSIS AND TREATMENT.

FOR THE

USE OF STUDENTS AND GENERAL PRACTITIONERS.

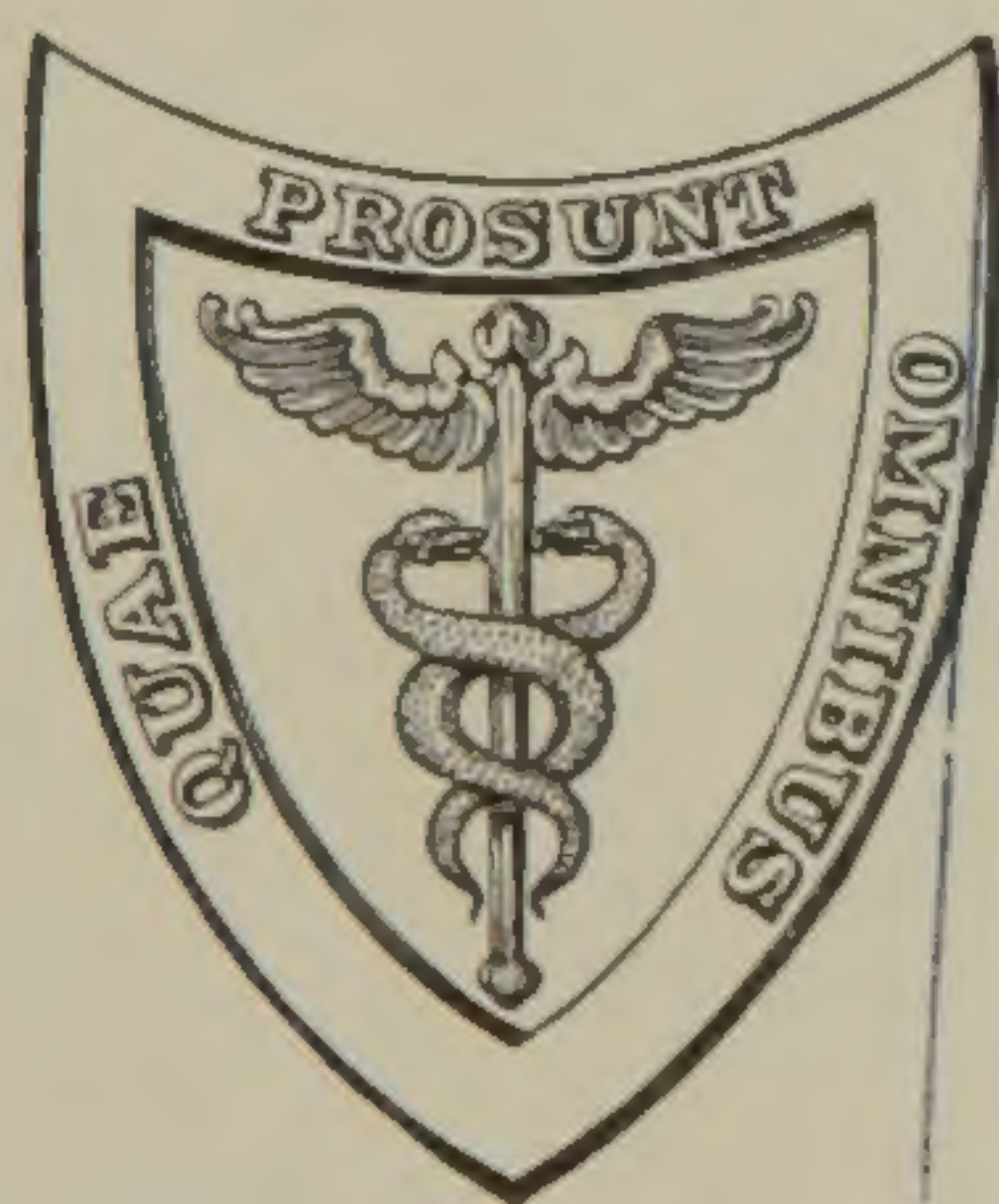
BY

W. A. HARDAWAY, A. M., M. D.,

PROFESSOR OF DISEASES OF THE SKIN AND SYPHILIS IN THE MISSOURI MEDICAL  
COLLEGE, ST. LOUIS; PHYSICIAN FOR DISEASES OF THE SKIN TO THE MARTHA  
PARSONS' HOSPITAL FOR CHILDREN AND TO ST. JOHN'S HOSPITAL;  
EX-PRESIDENT OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

*SECOND EDITION, REVISED AND ENLARGED.*

WITH 42 ENGRAVINGS AND 2 PLATES.



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# PREFACE TO THE SECOND EDITION.

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IN preparing another edition of this manual for the press I have to repeat that my aim throughout its pages has been to make it a useful and trustworthy reference book of the diseases of the skin, especially from the stand-points of diagnosis and treatment. With this object in view practical and fully established facts have been given more prominence than theoretical questions, although these latter have not been altogether neglected.

Each section has received a thorough revision, and much new matter has been added. A few illustrations have been introduced.

Some few changes in the arrangement of the book will be noticed. In the first place, it has been thought best to present the various diseases of the skin under an orderly system of classification instead of alphabetically as heretofore; and, secondly, the appendixes of formulæ, etc., have been omitted, since all necessary directions as to diet and the proper use of remedies are to be found in the text.

I have availed myself fully, and often literally, of the labors of others, although I believe in most instances these obligations will be found amply recognized.

While renewing my thanks to the several friends who assisted me in the first edition of this book, I wish to acknowledge my present indebtedness to Dr. R. W. Taylor for permission to use a number of illustrations from his works, to Dr. Joseph Grindon for kindly looking over some of the proof sheets, to Dr. H. N. Lyon for the preparation of the section on Diseases of the Nails, and to Dr. G. M. Gorin for making the index.

W. A. H.

ST. LOUIS, August, 1898.







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# MANUAL OF SKIN DISEASES.

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## INTRODUCTORY OBSERVATIONS.

### SECTION I.

#### Symptomatology.

THE various symptoms that arise in the course of diseases of the skin may, for convenience sake, be divided into two main classes, namely, the objective and the subjective.

A thorough knowledge of these manifestations and a full appreciation of their significance are essential to accurate diagnosis and successful treatment. At the same time, the careful practitioner will not lose sight of any especial or general constitutional disturbances that may attend the purely local expressions of cutaneous disorder.

**OBJECTIVE SYMPTOMS.** The objective symptoms are those that are sensible to the eye and to the touch, and constitute the pathological changes by which we are enabled to recognize the general characters or special peculiarities of the manifold disorders of the skin. All cutaneous affections are made up of certain elementary forms called primary lesions, that have been justly termed the alphabet of dermatology; and there are also to be recognized certain other manifestations that are partly sequelæ of the initial processes, or are the effects upon them of traumatism; these are called secondary lesions.



PRIMARY OR ELEMENTARY LESIONS. These are eight in number, and may be thus grouped:

- |               |              |
|---------------|--------------|
| 1. Macules.   | 5. Vesicles. |
| 2. Papules.   | 6. Pustules. |
| 3. Tubercles. | 7. Blebs.    |
| 4. Tumors.    | 8. Wheals.   |

It must be borne in mind that these elementary forms represent the most varied pathological conditions, and are associated with the most diverse diseases. Thus it will be seen that they may be the products of inflammation, or of new growth, of hemorrhage, of hypertrophy or of mechanical obstruction. In another section reference will be made to the individual diseases with which they are connected, and their significance in diagnosis will be pointed out, but in this place attention will be directed only to their definitions and clinical features.

*Macules* (maculæ) are circumscribed changes in the color of the skin, with more or less alteration in its consistence, without elevation or depression.

*Papules* (papulæ) are solid elevations of the skin, from the size of a pin-head to a split pea, and are in shape acuminate, angular, round or flat. They may have a red color, or may be white, yellow, ham-colored or even purplish. When isolated, they are said to be discrete; when aggregated in patches of different sizes and shapes, they are said to be confluent.

*Tubercles* (tubercula) are large solid elevations of the skin, which, roughly speaking, may vary in size from a coffee-bean to a cherry. The portion of a tubercle visible as a projection from the surface of the skin may not be larger than a papule, but it differs essentially from the latter structure in that it is imbedded deeply in the derma, perhaps the greater part of the lesion being thus situated.

*Tumors* (phymata) are variously sized and shaped, soft or solid growths larger than tubercles. They may be sessile or pedunculated, rising above the surface of the skin, or deeply sunk in its substance.



*Vesicles* (vesiculæ) are minute elevations of the epidermis containing fluid, and are analogous in size to papules. Vesicles may be rounded, acuminate, angular, umbilicated or flat, full or flaccid, clear, opaque or sanguinolent. When very small they are said to be miliary: when large, phlyctenular.

*Pustules* (pustulæ) are small, circumscribed collections of pus situated under the epidermis, varying in size from a pin-point to a split pea. They may be opaque or yellow, round, flat or acuminate, and are frequently surrounded by an areola.

*Blebs* (bullæ) are elevations of the epidermis containing fluid, are round or irregular in outline, and are of the bigness of a pea up to that of a small orange. Some bullæ are tense and prominent, and others are flat and wrinkled. They may be white, reddish or straw-colored.

*Wheals* (pomphi) are fugitive elevations of the skin, oval, round or forming segments of circles. They may be white or pinkish, or have pale centers with a red periphery. The subjective sensations accompanying the nettle-like lesions are burning, tingling and itching.

SECONDARY LESIONS. As stated above, there are certain objective manifestations that are consecutive to those just described. Most dermatologists are agreed in recognizing the following six varieties:

- |              |                  |
|--------------|------------------|
| 1. Scales.   | 4. Excoriations. |
| 2. Crusts.   | 5. Ulcers.       |
| 3. Fissures. | 6. Scars.        |

*Scales* (squamæ) are large or small, attached or detached portions of epidermis. When the scales are fine and small they are said to be furfuraceous: when they come off in large plates the process is called lamellar desquamation.

*Crusts* (crustæ) are dried masses of exuded or extravasated material, of a yellowish, blackish, greenish or reddish color according to their source: and they may be thick or thin, firm or friable, dry, gummy or greasy, large or small, closely adherent or readily separable.



*Fissures* (rhagades) are linear cracks or wounds of the skin due to external causes, or are the result of inflammatory processes.

*Excoriations* (excoriationes) are abrasions and losses of substance of the superficial layers of the skin, generally due to excessive scratching.

*Ulcers* (ulcera) are variously shaped and sized excavations in the skin or subcutaneous tissue, and are always the result of previous disease.

*Scars* (cicatrices) are new formations of connective tissue that supply the place of lost material, their size, shape, elevation or depression depending upon the character of the preëxisting lesions.

**SUBJECTIVE SYMPTOMS.** Many diseases of the skin are unaccompanied by subjective symptoms of any sort; on the other hand, there may be present all grades of sensation from a feeling of simple discomfort to agonizing pain or intolerable itching. Thus there may exist anæsthesia, hyperæsthesia, pain and pruritus, but of all these symptoms itching is the most prominent and distressing.

## SECTION II.

### Causes of Skin Diseases.

The etiology of cutaneous maladies embraces a great variety of agencies, and, although the subject is one that offers many difficulties, and about which we have a vast deal to learn, yet dermatology has also kept pace in this matter with the general science of medicine, and we have long ceased to regard disorders of the skin as the result of certain peccant humors in the blood; on the contrary, a rational study of the subject will disclose the fact that skin diseases may be brought into existence by all the manifold, and often inexplicable, causes that are the source and origin of all other morbid states in the system at large. Therefore, making certain reservations, the result of necessarily limited knowledge, it is perfectly proper to speak of skin diseases as due to *internal causes* on the



one hand, and as being evoked by *local influences* on the other.

Under the first category are to be placed affections arising from general disorders of the system, *e. g.*, syphilis, variola, typhus, diphtheria, lepra, diabetes, etc., of which the skin lesions are the local expression ; and further under this head we find certain disorders of the cutaneous surface associated with or dependent upon functional or organic disturbances of the body. For example, acne and rosacea are often connected with gastric, intestinal or uterine affections, pruritus with morbid states of the liver, while disturbances of the nervous system are probably responsible for many skin diseases. Other diseases of the skin are due to inherited tendencies or are produced by direct transmission, such as ichthyosis, syphilis, etc. At the same time the causative influence of *pregnancy*, of various articles of *diet* and the ingestion of *drugs* should not be forgotten.

Among the most active *local exciting agents* are to be mentioned *heat, cold, and chemical substances, clothing*, the irritation and inflammation set up by innumerable members of the *vegetable kingdom*, and the inroads made by *animal and vegetable parasites*. In later years especially the *parasitic origin* of many skin diseases has been amply demonstrated, and the improved methods of modern research will doubtless soon greatly extend the present by no means meagre list.

We must also be careful to note certain *predisposing causes* of diseases of the skin, among which may be particularly mentioned *age, sex* and the influence of the *seasons*. Finally, it is well known that *geographical limits* play some rôle in affecting the character and frequency of cutaneous maladies ; thus leprosy, pellagra and yaws seem to prefer certain sections of the globe ; and even some of the more common skin affections are more frequently met with in Europe than in America. It is quite possible, however, that matters of general and personal hygiene, the nature of the food supply, etc., will largely explain these variations in type and comparative frequency.



## SECTION III.

## Diagnosis.

The difficulties in connection with the diagnosis of skin diseases have been much exaggerated. It should be remembered that the same pathological processes, viz., atrophy, hypertrophy, inflammation, new growth and functional disorder, prevail in this organ as elsewhere; and that a recognition of this fact, together with a careful study of certain features of morbid action more or less peculiar to the skin, will be of great advantage in approaching the study of dermatology. Above all, it is well that some systematic scheme of examination be formulated, the meaning and value of which the physician should clearly appreciate. Consequently among dermatologists some such plan as the following is usually adopted.

The patient should always be examined by *daylight* in a *pleasantly warmed room*, since many affections present shades of color whose recognition is an essential, and the mere act of undressing in a low temperature will cause mottling and congestions of the integument that may give rise to erroneous impressions.

As much of the *surface of the body* should be inspected as is compatible with the requirements of decency; indeed, with a little ingenuity, even in the case of women, this may be accomplished by examining different portions of the body in succession. Although, as a matter of course, this rule is not absolute when a disease is obviously localized, still in general eruptions or in doubtful cases there is no other way of coming to a satisfactory conclusion. As an illustration I may cite the fact that a patch of psoriasis on the face may be ill defined, whereas on the elbows or knees the feature of the disease may be characteristic; or one form of syphilide in one region is of dubious aspect, whereas a general inspection will reveal another variety of a typical character.

Although Hebra has said that for the recognition of a disease of the skin no other assistance is required than a



knowledge of the objective symptoms, a little reflection will show that the *history of the case* is of prime importance.

With regard to the *age* and *sex* of the patient we are at once aware that neither acne nor tinea versicolor occurs in children, but that ringworm of the scalp does, and usually spares the adult, that lupus appears early and epithelioma late in life, and that ichthyosis is a congenital affection; and further that sycosis is a disease of males, and that lupus erythematosus is more frequent in women.

The *occupation* frequently gives a clue to the diagnosis; for example, bakers and grocers have eczema, and so do plasterers, barkeepers and washerwomen, while workers in sugar-refineries not uncommonly suffer from furunculosis, and artisans who handle chemical and other irritants contract various grades of dermatitis.

The *past history* of the case informs us of previous attacks of skin disease from which we may draw valuable conclusions, and in syphilis especially is of the utmost importance. The *general symptoms* of the patient must not be neglected. The *thermometer* will inform us of the temperature and *chemical analysis* will reveal the presence or absence of albumen in the urine. No amount of knowledge of local lesions would inform us that a general furunculosis was due to diabetes, but a urinary analysis would quickly determine the question.

The *microscope* is of inestimable value in diagnosis, especially in determining the presence of parasites.

Since the ingestion of many *drugs* provokes in many people the most varied lesions on the skin, a careful inquiry in this direction should never be neglected. The physician should also be aware that *feigned eruptions* are often produced by hysterics and malingerers upon themselves for purposes of deceit.

While the merely *subjective sensations* of a patient are not of paramount value in diagnosis, and the local symptoms will frequently attest the truth of statements made in that regard—for example, the presence of scratch marks testifying to the existence of itching—one must not put



aside as of no weight the statements of intelligent people.

In endeavoring to make a diagnosis from the objective symptoms presented to the eye, we must take into consideration the following points: *Extent of surface involved.* The acute eruptive disorders occupy the whole of the body, and the early syphilides are widely distributed, acne is found upon the face and back, eczema may occupy various regions, while psoriasis is usually symmetrically distributed on both sides of the body. Lupus and epithelioma are observed to attack the face; xanthoma is common on the lower lids; tinea versicolor is found upon the trunk and arms.

*Arrangement of Lesions.* In syphilis the eruption is apt to be grouped; in zoster it follows the line of cutaneous nerves and the vesicles are corymbose or clustered. In ringworm the lesion affects a ringed arrangement, and extends at its periphery, clearing in the center; this also is to be observed in psoriasis; herpes iris is annular.

*Color.* The recognition of certain diseases of the skin is often facilitated by a due appreciation of the varying shades of color that they present. The crusts of favus are sulphur-yellow, the patches of tinea versicolor are fawn colored, and some syphilitic eruptions have the tint of raw ham, keloidal tumors are pinkish, while the new growths of xanthoma have a buff or yellowish hue.

*Acute or Chronic.* Care should be taken to note whether an eruption be acute or chronic, what changes have occurred in its progress, and especially to observe the peripheral and extending margins of a patch, as often in this way one is able to make out the real nature of a disease that has become obscured by complications or treatment. Thus, by the discovery of an apple-jelly nodule in the neighborhood of an ulceration, it is possible to establish the differential diagnosis between lupus and syphilis in an otherwise doubtful case.

*Individual Lesions.* The study of the primary and secondary lesions presented in a given case is of the utmost importance.



It is not claimed that the recognition of an elementary or secondary lesion will immediately give the key to the diagnosis : for it is well known, as frequently stated before, that the lesions are due to the most diverse pathological causes, and that the same lesion is to be found in many different diseases : but it is of essential advantage to be aware, for example, that in herpes zoster we have vesicles and not tubercles, and that in variola the lesions are successively papules, vesicles and pustules, and not blebs, tumors and wheals.

In Part II. of this work the characteristic features of the several diseases will be fully discussed, and it is recommended always to study a morbid process as a whole, and not lay especial stress on any one symptom, however prominent ; but to assist somewhat I append a list of the various primary or secondary lesions together with the diseases with which they are commonly associated :

*Macules* are to be observed in *chloasma*, *eczema*, *erysipelas*, *roseola*, *rubeola*, *scarlatina*, *rötheln*, *erythema*, *ephelis*, *leucoderma*, *melanoderma*, *tinea versicolor*, *syphilis*, *xanthoma*, *purpura*, *navus pigmentosus* and *morphea*. When a large portion or a whole of the skin is involved by change of color, it is known as a *discoloration*, such, for example, as is seen in Addison's disease, leprosy and argyria.

*Papules* are to be recognized in *acne*, *milium*, *comedo*, *eczema*, *lichen*, *prurigo*, in certain kinds of *purpura*, and *urticaria*, and in *variola*, *keratosis pilaris*, *ichthyosis*, and *miliaria papulosa*. The eruptions of *measles* and *rötheln* are really maculo-papular in character. In *syphilis* the papule is often surmounted by a scale.

*Tubercles* are found in connection with *syphilis*, *leprosy*, *parasitic sycosis*, *acne*, *molluscum epitheliale* and *lupus*.

*Tumors* are to be noted in *carcinoma*, *sarcoma*, *syphilis*, *elephantiasis*, *angioma*, *keloid*, *lipoma*, *fibroma* and *erythema nodosum*.

*Vesicles* are present in *eczema*, *herpes*, *vaccinia*, *suda-*



*men*, *miliaria*, *varicella*, *dermatitis*, *dysidrosis*, *scabies*; vesico-pustules are observed in *impetigo contagiosa*, the *vesicular syphilide*, etc.

*Blebs* occur in *pemphigus*, *hydroa*, *erysipelas*, *herpes iris*, *leprosy*, *syphilis* and *dermatitis*.

*Pustules* are encountered in *acne*, *variola*, *ecthyma*, *equinia*, *impetigo*, *scabies*, *syphilis*, *sycosis*, *dermatitis* and *pustula maligna*.

*Wheals* are found in connection with irritable states of the skin, such as occur from the bites of *insects*, and most typically in *urticaria*, and also in some degree with *purpura* and *erythema multiforme*.

*Scales* are to be observed in *psoriasis*, *eczema*, *pityriasis rubra*, *exfoliative dermatitis*, *scarlet fever*, *measles*, *seborrhœa*, the *vegetable parasitic affections*, and *ichthyosis*.

*Crusts* are to be found in *eczema*, *syphilis*, *scabies*, *ecthyma*, *scrofuloderma*, *leprosy*, *syphilis*, *impetigo*, *carcinoma*, *seborrhœa*, *herpes zoster* and *sycosis*.

*Fissures* occur in *eczema*, *psoriasis*, *syphilis*, *ichthyosis*, *verruca*.

*Excoriations* are to be seen in pruriginous disorders, such as *eczema*, *pruritus*, *pediculosis*, *scabies*, etc.

*Ulcers* appear as sequelæ to the lesions of *syphilis*, *lupus*, *boils*, *carbuncles*, *herpes zoster*, *scrofuloderma*, *epithelioma*, *sarcoma*.

*Scars* come in the wake of ulcerative skin diseases; e. g., *lupus vulgaris*, *syphilis* and also *lupus erythematosus*.

### Local Distribution of Skin Diseases.

As a further help in diagnosis, and as presenting a fairly satisfactory view of the surface distribution of diseases of the skin, I have appended the following table. The form of it is taken from the scheme by Pye-Smith as revised by Liveing, although I have omitted some of the features of the original, and made a few alterations and additions:  
SCALP: Eczema; Seborrhœa; Alopecia; Alopecia are-



ata; Psoriasis; Syphilis (early and late); Steatoma; Favus; Ringworm (in children); Pediculosis (often at occiput).

**FACE** (in general): Small-pox; Measles; Erysipelas (tendency to spread from one side to the other); Acne; Rosacea; Ephelides; Chloasma; Comedo; Miliun; Eczema; Lupus vulgaris and erythematosus; Epithelioma; Syphilis; Erythema; Molluscum contagiosum. It will be seen further on that some of the diseases mentioned occupy by preference certain well-defined regions of the face.

*Forehead*: Chloasma; Syphilis; Psoriasis (as an extension from the scalp); Acne; Zoster (limited to one side); Epithelioma.

*Eyebrows*: Seborrhœa; Alopecia areata et syphilitica.

*Eyelids*: Xanthoma; Miliun; Eczema tarsi.

*Nose*: Lupus; Syphilis; Epithelioma; Rhinoscleroma (especially beginning in a single ala or at the septum); Rosacea; Seborrhœa.

*Nose and Cheeks*: Rosacea; Lupus erythematosus (butterfly shape).

*Nostril Orifice*: Folliculitis (of the vibrissæ); Impetigo; Herpes.

*Upper Lip*: Eczema; Herpes; Lupus.

*Lower Lip*: Epithelioma; Syphilis.

*Mouth* (mucous membrane): Herpes; Syphilis; Measles; Small-pox; Leucoplasia; Lupus; Lichen planus; Pemphigus.

*Bearded Face*: Sycosis; Pustular Eczema.

*Ears*: Lupus erythematosus; Lepra; Xanthoma tuberosum; Syphilis; Eczema.

**NECK**: Scarlatina; Eczema; Intertrigo; Furuncle (nape); Carbuncle (nape); Sycosis.

**BACK**: Acne; Tinea versicolor; Pediculosis; Seborrhœa; Carbuncle.

**CHEST**: Scarlatina; Varicella; Recent Syphilis (more at sides); Seborrhœa; Keloid (over sternum); Lenticular Cancer.



*Breasts* : Eczema ; Keloid.

*Nipples* : Scabies ; Eczema ; Paget's Disease.

SIDES OF TRUNK : Zoster (unilateral) ; Syphilis.

ABDOMEN : Typhoid and Typhus rashes ; *Tinea versicolor* ; Syphilis (early) ; Scabies (lower portion).

*Umbilicus* : Scabies ; Carcinoma (secondary) ; Erysipelas (in infants) ; Seborrhœa.

SCROTUM : Eczema ; Pruritus ; Syphilis ; Elephantiasis.

PREPUCE : Scabies ; Herpes ; Syphilis ; Chancroid ; Eczema.

NATES : Furuncle ; Carbuncle ; Scabies ; Syphilis (infantile).

ANUS : Eczema ; Pruritus ; Mucous Tubercles.

ELBOWS : Bilateral, flexor side : Eczema ; Xanthoma planum. Bilateral, extensor side : Psoriasis, Ichthyosis, Xanthoma tuberosum.

FOREARMS AND BACKS OF HANDS : Erythema multiforme ; Pityriasis rubra pilaris.

WRISTS : Flexor surfaces : Scabies ; Lichen planus. Extensor surfaces : Small-pox.

HANDS AND FEET : Eczema ; Scabies (between fingers and toes, the latter mostly in children) ; Callositas.

*Palms and Soles* : Eczema ; Syphilis (also bullous form in infants).

*Fingers and Toes* : Chilblains ; Pompholyx.

*Nails* : Hypertrophy (idiopathic, and in connection with psoriasis, leprosy, ichthyosis, etc.) ; Onychomycosis ; Onychia ; Paronychia ; Atrophy (congenital and acquired).

AXILLÆ AND GROINS : Eczema ; Intertrigo ; Ringworm ; Erythrasma.

THIGHS : Extensor surfaces : Prurigo ; Keratosis pilaris.

KNEES : Symmetrical, extensor side : Psoriasis ; Ichthyosis. Symmetrical, flexor side : Eczema.

LEGS : Eczema ; Elephantiasis ; Ulcers (if eczematous, occupy usually the lower third ; if syphilitic, apt to be on upper portion) ; Erythema nodosum ; Purpura ; Ecthyma.



## SECTION IV.

## Treatment.

The old humoralistic doctrine of former days, that there was danger in "driving in" eruptions, has long ceased to be accepted, having been found untrue in theory and mischievous in practice. As a matter of fact and experience no fear is entertained at the present time of curing a skin disease as rapidly and completely as possible; our only concern is as to the best means to reach this end.

It is a great mistake, moreover, to suppose that the therapeutics of skin diseases is exceptional and peculiar; their management is based upon the same general principles that obtain for disorders of the economy generally. Of course the local measures employed are more or less modified to suit the exigencies of the part involved, just as they would be for similar or analogous diseases of the eye, throat or uterus. Consequently, in treating an affection of the skin, attention must be given to hygiene, dietetics, internal remedies and local applications.

*Hygiene.* From what has preceded, it is apparent that hygienic regulations in this particular field are based upon the general principles of the science, and have a due relation to pure air, necessary ventilation, exercise and the proper care of the skin, all of which will depend upon the special features of the case in hand. Properly speaking, it should also include the careful study of predisposing and exciting causes, hereditary tendencies and personal idiosyncrasies.

It is a deeply seated conviction among the laity that skin diseases are in many instances filth diseases, and that the free use of soap and water is the true and perfect prophylactic in most cases. While certain affections of the skin are due to contagion and some few to uncleanness, the great majority have no such etiology, and the most ideal purity of the cutaneous envelope would be powerless to stay their progress. While there is no question of the benefits resulting from soap and water, even for the healthy skin



care must be exercised as to the quality of the materials employed. A bad soap and hard water may do great harm, and surely the fanatical taking of Turkish and such like baths often sets up much mischief. In some forms of actual disease of the skin soap and water are directly contra-indicated.

The more especial application of hygienic rules will receive fuller treatment in Part II.

*Food.* Under the head of the "Causes of Skin Diseases" it was stated that foods of certain kinds were probably responsible for various cutaneous disorders; at any rate in the rational treatment or management of such cases it is absolutely essential that the physician regulate the dietary of his patient intelligently. Certain foods seem to have a very direct deleterious effect on the skin, while others are injurious by virtue of their indigestibility and aptness to produce gastric and intestinal derangements. All such articles should be stricken from the diet-list. Under the first class may be mentioned various acid fruits, especially strawberries, shell-fish of certain kinds, alcohol and some varieties of nuts. Of course idiosyncrasy must be taken into account. I should also add oatmeal to this *index expurgatorius*, although I am aware that its injurious effects have been disputed; whether they are direct or are due to the frequent dyspepsias that arise under its use I cannot say; still my own experience has been so positively against its employment as an article of diet that I always interdict its use.

Under the second head, including those foods that are by nature indigestible, either in themselves or from their method of preparation, should be placed pastry, fresh bread and cakes, all fried articles, pork, pickles, gravies, sweets, and, as a rule, tea and coffee.

Tobacco is generally harmful. Here I should also warn against the inordinate drinking of iced water, especially just before meals. When constipation exists, hot water a half-hour before breakfast and at bedtime and ordinary cold water between meals are very beneficial.



In treating nursing infants our best efforts will be defeated by failure to regulate the diet of the mothers.

*Internal Treatment.* The internal treatment of skin diseases is mainly symptomatic, and, according to the indications present, are prescribed iron, quinine, cod-liver oil, purgatives, diuretics, stomachics, etc. There are three agents, however, that call for especial mention, since they are supposed to be signally efficacious in dermatological practice. These are arsenic, mercury and the preparations of iodine. Of the last two drugs it may be said that they find their particular field in the treatment of syphilis, and judiciously administered are almost entitled to the rank of specifics. But of arsenic this cannot be said. There is no other article in the materia medica more widely and, at the same time, more ignorantly and harmfully used. Instead of being the well-nigh universal panacea for all cutaneous ailments, its range of employment is quite strictly circumscribed.

As a rule it is contra-indicated in all acute eruptions, and its chief value is in chronic scaly affections and those of neurotic character.<sup>1</sup>

A host of other remedies have been administered with asserted advantage as acting directly and beneficially upon various skin diseases. Among the drugs most worthy of confidence may be mentioned tar, carbolic acid, antimony, turpentine, ichthyol, calx sulphurata and some others of more doubtful repute. It is notoriously difficult to arrive at definite therapeutic conclusions, and this is particularly true in dermatological practice where the local treatment is usually simultaneously prescribed.

*Local Treatment.* An accurate knowledge of the various local measures required in the treatment of the diseases of the skin is of paramount importance to the dermatologist. The vexed question as to whether local treatment can be used to the exclusion of the internal treatment, or *vice versa*, need not detain us here; for I

<sup>1</sup> See the author's article "On the Question of the Value of Arsenic in Skin Diseases," Jour. Cutaneous and Venereal Dis., Aug., 1886.



think it is agreed by all practical physicians that a judicious combination of the two methods affords the best result. It is nevertheless true that dermatology is a branch of surgery rather than of medicine, and its therapeutics is therefore mainly surgical. Consequently at one time the aim is to give rest to a part, at another time to effect gentle or more decided stimulation, to cause absorption, or, finally, to remove or otherwise destroy by means of the knife and the actual or potential cautery. As throughout the body of this work the various remedies, medicinal and mechanical, are fully indicated, I shall merely state that the local armamentarium includes baths, soaps, lotions, ointments, oleates, pastes, powders, oils, plasters, pigments, electricity and the various mechanical and chemical destructive agents.

## SECTION V.

### Classification.

Most systematic writers on dermatology have tried their hands at constructing systems of classification, and we have been presented with many schemes of more or less merit dating from the original anatomical grouping of Plenck down to the profoundly learned and elaborate arrangements of Auspitz and Bronson. The effort is laudable, but the results in the present state of knowledge must be to a degree unsatisfactory, and it would be infinitely wiser if the energies of dermatologists were expended on a uniform system of nomenclature, which is an urgent necessity, than on classifications that need constant revision.

For teaching purposes, the best scheme extant is that of Hebra, and the one here adopted is based upon his system as modified by Crocker, with certain unimportant omissions and additions. In the arrangement and treatment of subjects in the descriptive part certain departures from the scheme of classification may be noted, which were made necessary by the general plan of the work. So far as possible the nomenclature of the American Dermatological Association has been adopted.



## CLASSIFICATION OF DISEASES OF THE SKIN.

## CLASS I.—INFLAMMATIONS.

Erythema simplex.	Dermatitis herpetiformis.
Erythema neonatorum.	Eczema.
Erythema traumaticum.	Eczema seborrhoicum.
Erythema caloricum.	Dermatitis repens.
Erythema intertrigo.	Prurigo.
Erythema læve.	Psoriasis.
Symptomatic erythema.	Pityriasis maculata et circinata.
Erythema scarlatiniforme.	Dermatitis exfoliativa.
Erythema exudativum multiforme.	Pityriasis rubra.
Erythema bullosum.	Epidemic exfoliative dermatitis.
Erythema iris.	Dermatitis exfoliativa neonatorum.
Erythema nodosum.	Parakeratosis variegata.
Erythema induratum.	Urticaria.
Erysipelas.	Urticaria pigmentosa.
Erysipeloid.	Angioneurotic œdema.
Pellagra.	Lichen ruber.
Acrodynia.	Lichen planus.
Furunculus.	Lichen pilaris.
Carbunculus.	Pityriasis rubra pilaris.
Anthrax maligna.	Dermatitis factitia.
Equinia.	Sphaceloderma.
Dissection wounds.	Dermatitis gangrænosa infantum.
Impetigo.	Multiple gangrene in adults.
Impetigo contagiosa.	Symmetrical gangrene.
Ecthyma.	Diabetic gangrene.
Pompholyx.	Dermatitis medicamentosa.
Herpes simplex.	Dermatitis venenata.
Herpes progenitalis.	Dermatitis calorica.
Herpes facialis.	Dermatitis congelationis.
Herpes zoster.	Dermatitis traumatica.
Pemphigus vulgaris.	Vaccinal eruptions.
Pemphigus foliaceus.	
Pemphigus vegetans.	
Impetigo herpetiformis.	

## CLASS II.—HEMORRHAGES.

Purpura simplex.	Peliosis rheumatica.
Purpura hæmorrhagica.	



## CLASS III.—HYPERTROPHIES.

Lentigo.	Clavus.
Chloasma.	Cornu cutaneum.
Anomalous discoloration of the skin.	Verruca.
Acanthosis nigricans.	Papilloma cutis.
Argyria.	Nævus pigmentosus.
Tattooing.	Ichthyosis.
Keratosis pilaris.	Sclerema neonatorum.
Keratosis senilis.	Œdema neonatorum.
Keratosis palmaris et plan- taris.	Scleroderma.
Kerato-angioma.	Morphœa.
Callositas.	Elephantiasis.
	Acromegaly.
	Myxœdema.

## CLASS IV.—ATROPHIES.

Leucoderma.	Glossy skin.
Atrophia cutis.	Ainhum.
Perforating ulcer.	

## CLASS V.—NEW GROWTHS.

Cicatrix.	Mycosis fungoides.
Keloid.	Sarcoma.
Fibroma.	Syphiloderma.
Lipoma.	Leprosy.
Myoma.	Morvan's disease.
Neuroma.	Colloid degeneration of the skin.
Osteoma.	Adenoma sebaceum.
Xanthoma.	Adenoma of sweat-glands.
Xanthoma diabeticorum.	Multiple benign cystic epi- thelioma.
Angioma.	Leucokeratosis buccalis.
Nævus vasculosus.	Psorospermiosis cutis.
Telangiectases.	Keratosis follicularis.
Angioma serpiginosum.	Molluscum contagiosum.
Lymphangioma.	Carcinoma cutis.
Lymphangioma, simple.	Epithelioma.
Lymphangioma, cavernous.	Paget's disease.
Lymphangioma, cystic.	Framboesia.
Xeroderma pigmentosum.	Verruga.
Rhinoscleroma.	Aleppo boil.
Tuberculosis cutis.	Tropical ulcer.
Lupus vulgaris.	
Scrofuloderma.	
Lupus erythematosus.	



CLASS VI.—NEUROSES.

Hyperæsthesia.  
Dermatalgia.

Pruritus.  
Anæsthesia.

CLASS VII.—DISEASES OF THE APPENDAGES OF THE SKIN.

A. SWEAT GLANDS :

1. *Functional disorders.*

Hyperidrosis.  
Anidrosis.  
Bromidrosis.  
Chromidrosis.  
Uridrosis.  
Hæmatidrosis.  
Phosphorescent sweat.

2. *Organic affections.*

Hidradenitis suppurativa.  
Miliaria rubra.  
Miliaria crystallina.  
Chronic miliaria.  
Hidrocystoma.  
Miliary fever.

B. SEBACEOUS GLANDS :

Seborrhœa.  
Seborrhœa oleosa.  
Seborrhœa sicca.  
Asteatosis.  
Comedo.  
Milium.  
Steatoma.  
Acne.  
Acne simplex.  
Acne vulgaris.  
Acne rosacea.

Acne varioliformis.

C. HAIR-FOLLICLES :

Canities.  
Discoloration of the hair.  
Hypertrichosis.  
Atrophia pilorum propria.  
Fragilitas crinium.  
Trichorrhæxis nodosa.  
Plica polonica.  
Piedra.  
Alopecia.  
Alopecia areata.  
Folliculitis decalvans.  
Dermatitis papillaris capillitii.  
Conglomerate suppurative perifolliculitis.  
Sycosis.

D. NAILS :

Onychauxis.  
Atrophia unguis.  
Onychia.  
Onychomycosis.  
Leucopathia unguium.  
Scleronychia.  
Spoon nails.  
Reedy nails.  
Pterygium.

CLASS VIII.—PARASITIC DISEASES.

A. VEGETABLE :

Tinea favosa.  
Tinea trichophytina.  
    *a.* Tinea circinata.  
    *b.* Tinea tonsurans.  
    *c.* Tinea barbæ.  
Tinea imbricata.

Fungous foot of India.  
Actinomycosis of the skin.  
Tinea versicolor.  
Erythrasma.  
Pinta disease.



PARASITIC DISEASES.—*Continued.*

## B. ANIMAL :

Scabies.

Demodex folliculorum.

Pediculosis capillitii.

Pediculosis corporis.

Pediculosis pubis.

Filaria medinensis.

Pulex irritans.

Pulex penetrans.

Cimex lectularius.

Culex pipiens.

Ixodes ricinus.

Leptus autumnalis.

Dermanyssus avium.

Cysticercus cellulosæ  
cutis.

Echinococcus hydatid.



# DISEASES OF THE SKIN.

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## CLASS I.—INFLAMMATIONS.

### ERYTHEMA SIMPLEX.

ERYTHEMA may be defined as a redness of the skin, that temporarily fades upon pressure, and that appears in the form of diffused or circumscribed, variously-sized lesions, usually without elevation above the integument. It must be acknowledged, however, for reasons that cannot be detailed here, that any hard-and-fast definition is difficult to make, and the one adopted is solely in the interest of clinical convenience.

So far as the local expression on the skin is concerned, the eruption may appear in the form of patchy redness, or in diffuse areas, or in streaks and stripes of different sizes and shapes. The older writers restricted the term erythema to lesions of the kind just described, but if the cutaneous congestion made its appearance in finger-nail sized spots, or assumed various punctate, annular, and gyrate forms, it was called roseola, with a qualifying adjective indicating peculiarities of shape, etc. In what was called roseola infantilis, the patches of congestion were described as of small size, closely grouped, and not unlike in general appearance to the rash of measles. There is really no warrant for these distinctions, and there is no question that mild cases of scarlet fever, rubeola and rötheln were responsible for much of the cumbersome and intricate divisions of former times. The causes of simple erythema are numerous and of the most diverse character. It may be idiopathic or symptomatic.



### Idiopathic Erythema.

This form of erythema is brought about by the influence of external irritation upon the skin, which, if left unchecked, may go on to true inflammation.

Thus, among the numerous causes of this condition may be mentioned erythema from heat and cold (*erythema caloricum*); erythema from pressing, rubbing, scratching, and the congestion arising from ill-fitting garments, instruments, etc. (*erythema traumaticum*), and the active disturbances set up by animal and vegetable poisons (*erythema venenatum*).

The two most important varieties of erythema, that are usually considered under this head, are *erythema pernio*, or chilblain, and *erythema intertrigo*. The first will receive attention as *dermatitis calorica*, and the latter only will be described in this place.

### Erythema Intertrigo.

This form of erythema is always at first a simple hyperæmia of the skin, which occurs in parts of the body exposed to friction from the contact of opposed surfaces, and in children especially, it is often evoked by the irritation of urinary and faecal discharges. In severe cases the skin is hot and tender, there is a hypersecretion of sweat, the epidermis becomes macerated, and the parts are bathed in a muciform discharge, which frequently emits a highly offensive odor. Tilbury Fox stated that this discharge differed from that of *eczema*, in that it did not stiffen linen. Under circumstances of neglect, the surfaces may become fissured, raw and even extremely ulcerated.

The disease is usually found in the groins, the folds of the neck in fat babies, the gluteal furrows, the inner surfaces of the thighs and flexures of the joints. *Intertrigo* in infants may appear quite suddenly and, under proper management, may last but a few hours; on the other hand, if neglected or improperly treated, it may persist for weeks. When it is symptomatic of internal disorders of a



grave character, the course of the disease is considerably lengthened, and persists in spite of the best-directed efforts at cure. It is most frequently encountered in hot weather, although in infants it may be observed at all times of the year. Relapses are to be expected. According to Hutchinson, owing to the fatness of infants, the eruptions of syphilis occurring upon them are apt to take on the form of intertrigo, the irritation of the buttocks by fæces and urine inviting the syphilides to these situations.

There is little difficulty in the recognition of intertrigo in infants; after adult life has been reached there are several affections with which it might be confounded. The diagnosis from eczema is of no practical importance; indeed at times the line of demarcation is difficult to appreciate. Intertrigo may closely resemble the erythematous syphilide; but while the former is mainly limited to the buttocks and genital regions, the specific eruption may extend as far down as the heels; moreover, the color of the syphilide is significant, and other symptoms, such as mucous patches, etc., are generally to be discovered in the syphilitic child.

It is generally easy to prevent the occurrence of an intertrigo. Cleanliness is to be secured by ablutions with soft water and a bland soap, frequent change of diapers, the immediate removal of, and protection against, irritating discharges, and the use of a simple dusting powder (*Zinci oxidi*, ʒij; *pulv. sem. lycopodii*, ʒvj). After the disease has become established, it is well to keep the parts separated by the interposition of pieces of lint, and to apply a powder that is somewhat astringent (*Thymol.*, gr.j; *pulv. zinci oleatis*, ʒj). Duhring advises diluted lotio nigra in obstinate cases. In nearly all grades of intertrigo, I have secured the most admirable results with Lassar's paste:

℞. Acidi salicylici,	gr. xxx.
Zinci oxidi,	
Amyli,	āā ʒvj.
Vaselini,	ʒij. M.



I think a better formula is the modification of the above suggested to me some years ago by Dr. G. H. Fox :

R.	Acidi salicylici,	gr. xxx.
	Bismuthi subnitratis,	
	Corn starch,	āā ʒvj.
	Ung. aquæ rosæ,	ʒij. M.

This paste should be spread thinly over the involved surface. It is not only directly curative in its effects, but also affords a most admirable protection from irritating discharges. Brandt<sup>1</sup> recommends, after careful washing and drying, that the affected parts be painted with a three per cent. solution of chromic acid, to be followed by some bland powder. The applications should be repeated at intervals of three or four days. Sometimes, in the beginning, if there is much irritation, a weak antiseptic solution is applied for a few times before commencing the chromic acid.

#### Symptomatic Erythema.

When we bear in mind the anatomical and physiological peculiarities of the skin, and its intimate connection with the system at large, it is quite comprehensible that many morbid states of the organism find local expression in circulatory derangements of the integument. One of the commonest of these disturbances is hyperæmia of various grades. Certain general diseases, *e. g.*, variola, diphtheria, cholera, meningitis, vaccinia, etc., are often preceded, accompanied or followed by erythematous rashes. For the rash that is seen in connection with vaccinia, the reader is referred to the section on *Vaccinal Eruptions*, but a few words in regard to the symptomatic rash of variola will not be inappropriate here. The recognition of the prodromic erythema (*erythema variolosum*) of small-pox is of great importance in a diagnostic way. It is not found in all cases, and in some epidemics it is not seen at all, or very rarely. As a matter of fact, this prodromic eruption is not only an erythema, but also exhibits a petechial feature.

<sup>1</sup>Ann. de Derm. et de Syph., April, 1896.



The erythema may be diffuse (scarlatiniform) or of a patchy, measly character (morbilliform). This form of eruption may spread over the whole body, but when localized, it is apt to attack the neighborhood of joints, and especially, according to Simon, in the form of a streak starting from the ankle, and covering the skin over the extensor hallucis longus muscle. The petechial rash occupies tolerably constantly the lower portion of the abdomen, the genitals and inner sides of the thighs. The crural triangle of Simon is defined, when the patient lies with the legs in contact, by a line, representing its base, which crosses the abdomen transversely about the umbilicus, the apex pointing towards the mons veneris. The eruption also extends up the sides of the trunk to the axillæ, involving the axillary folds, the adjacent portions of the arm, and the pectoralis major muscle. Another variety of symptomatic erythema, about which there has been a great deal of difference of opinion, is aptly termed *erythema scarlatiniforme*. It makes its appearance more or less suddenly, has the physical characters of the scarlet fever exanthem, is accompanied by slight redness of the fauces, a moderate rise of temperature ( $100^{\circ}\text{F.}$ – $101^{\circ}\text{F.}$ ), lasts from two to six days, and is occasionally followed by desquamation. A much more severe type of the disease has been described, especially by French writers, in which the constitutional symptoms are more pronounced, and the duration of the disease—a month to six weeks—is much longer. Relapses are frequent, but gradually become milder in character. This is the relapsing desquamative scarlatiniform erythema of Besnier and Fereol. This rash is seen after surgical operations,<sup>1</sup> in septicæmia, the puerperal state, sometimes in menstruating women, tubercular peritonitis, during typhoid fever, and, according to Crocker, in children in the course of ague, and also after the administration of certain drugs, particularly mercury.

<sup>1</sup> Undoubtedly true scarlatina occurs after operations, the liability being due to diminished power of resistance. See Atkinson on Scarlatina and Scarlatiniform Rashes, Jour. Cutan. and Ven. Dis., Oct., 1886.



These various erythemata are probably of angio-neurotic origin, and it is easy to imagine how, under certain conditions, various agents, toxic or otherwise, acting upon the nervous centers should produce disturbance in the nervous and vascular systems of the skin.

The principal interest in these latter cases is in the differential diagnosis from scarlatina. From mild cases of scarlatina the diagnosis is confessedly difficult, and when much doubt exists it is best to give the patient the benefit of the doubt, and insist on isolation and seclusion for a reasonable period. In typical cases of scarlatina will be observed the usually pronounced prodromic symptoms: high fever, quick pulse, strawberry tongue, swollen fauces, enlarged glands; but while in the erythematous rash these symptoms are generally absent, the rash itself has no sites of predilection, occurring often in limited regions, and showing often healthy skin between the congested areas (Crocker).

More or less temporary congestions of the skin are known to occur in consequence of the ingestion of various drugs (*erythema medicamentosum*), although it is true that these rashes usually represent truly inflammatory processes.

One of the most frequent, and, at the same time, one of the most important in a negative way, of these symptomatic erythemata is the form commonly called *erythema infantile*, or *roseola infantilis*. In the older works on dermatology, and in most books on children's diseases, many pages are devoted to a description of this eruption. An attentive reading of such descriptions will show, as already stated, that much of what is set down as significant of the so-called *roseola*, really applies to a variety of other cutaneous diseases, more especially *rötheln*, mild cases of scarlatina and measles, and light attacks of urticaria. It is nevertheless true, as is well known to practical physicians, that evanescent congestions of the skin are quite common in young children, who are teething, or suffering from some slight derangement of the alimentary canal. These rashes generally assume the roseolous form, and are accompanied by



a slight elevation of temperature and perhaps some redness, without swelling, of the palate and fauces. It is said to be most common over the sacral region and buttocks. Its existence is often the cloak for ignorance and charlatanism. Much of what the laity and certain irregular practitioners call “scarlatina”—not knowing, or conveniently ignoring that scarlatina is the technical name for scarlet fever—is in reality this symptomatic erythema, which fact also explains the wonderful facility of its cure, and the statement that is often made, that a certain person has had repeated attacks of the specific rashes.

If one bears fully in mind the essential characteristics of the acute exanthemata—the heat of skin, the rapid pulse, the condition of the throat and tongue, the glandular engorgement, the location of the eruption of scarlet fever, and the peculiar prodromal period, the general catarrhal symptoms, and the features of both the mucous and cutaneous rash in measles—the difficulties of diagnosis will not be very great. Rötheln, the mildest of the exanthemata, is not at all times diagnosticated with such facility, and the differentiation is occasionally far from easy. Rötheln, however, is manifestly due to contagion, several children of a family probably being attacked at the same time: the eruption is more like that of measles, the glands behind the neck are enlarged, and the lesions of a more stable character.

The skin of newborn children is marked by a discoloration, which is at first red, then becomes yellowish red, and finally for a while of a quite bright red.

There is still another form of erythema, which it is clinically convenient to mention here, that has been termed erythema papulosum of the newborn, or erythema neonatorum. I have seen a number of examples of it, and its occurrence has occasionally given rise to much confusion in diagnosis. It makes its appearance in the first few days of life, and is thought to be due to the influence of external and unusual irritants acting upon the tender skin of an infant newly come into the world. The eruption consists



of very minute red papules, seated upon a hyperæmic base, which can be made to lose their color upon pressure.

The lesions are most pronounced upon the back and breast. They fade away in a few days, and the most congested spots exhibit a slight desquamation. The mucous membranes are unaffected, and there is no evidence of systemic reaction.

The symptomatic passive hyperæmiæ, which may result from a variety of agencies, *e. g.*, heat, cold, mechanical causes, pathological states, etc., need no particular description here.

### ERYTHEMA MULTIFORME.

Erythema multiforme is an exudative affection, characterized by various erythematous, papular, tubercular, vesicular, bullous and nodose lesions. It is very rare in my experience in this part of the United States, and, so far as my own observation is concerned, is met with in the papular and tubercular forms, and more rarely in the other varieties. Preceding the eruption on the skin certain well-marked constitutional symptoms will often be present, such, for example, as a general feeling of malaise, sore throat, rheumatoid pains, gastric disturbance and fever.

Sometimes even more formidable affections have been observed in connection with erythema multiforme, such as cardiac inflammations, pneumonia, pleurisy, acute rheumatism, etc. Osler<sup>1</sup> relates a number of cases in which gastrointestinal crises, colic, generally with vomiting and diarrhœa, occurred; in five patients there was acute nephritis. From the description there is some doubt as to the nature of all the cases recorded, some of them being presumably purpura. Very often, however, the eruption will appear without any especial accompanying general symptoms. The disorder may run its course in a few days, or persist for several weeks, or finally, with repeated relapses, endure for an indefinite period. I have had under my care a girl

<sup>1</sup>Am. Jour. Med. Sci., Dec., 1895.



of 13 years, who suffered from a curious form of erythema bullosum for more than four years, the attacks recurring in the same situations at stated intervals. T. C. Fox reports the cases of a brother and sister, who had suffered from erythema gyratum more or less for sixteen years.

Some persons regularly suffer from the disease with every return of the spring. The most usual site of erythema multiforme is upon the backs of the hands and feet, especially in the papular and tubercular forms, but it may subsequently, or even from the first, appear upon the rest of the body, and most abundantly around the painful joints. Upon the subsidence of the eruption slight desquamation and even considerable pigmentation may be observed.

The local subjective symptoms consist of burning, itching and a feeling of tension in the skin. It should be remembered that, while many of the different lesions of erythema multiforme may coexist, or may develop from one into the other, any one form of the disease may be alone present, and remain as such throughout. To the different elementary forms represented in the group have been given the following names :

When the disease assumes the erythematous form, the fading of the center of the patch leaves a ringed appearance that has been called *e. annulare* ; or concentric rings, one forming within the other, will leave in their wake, as the effusion becomes absorbed, a variety of different colors, thus justifying the rather fanciful term of *e. iris* ; or these advancing rings, meeting others, become broken into various lines producing *e. gyratum* ; or made up of widely diffused patches with an abrupt and sharply defined border, it is called *e. marginatum*. As usually seen, however, the disease makes its appearance in the form of discrete or aggregated flat papules, varying in size from a pin-head to a split pea ; in color they are bright red or purplish. Often the lesions are considerably larger (*e. tuberculatum*) in which case they have a deeper or violaceous hue that is quite characteristic. Vesicles or bullæ may accidentally form in connection with any of the



forms mentioned above, *e. vesiculosum*, *e. bullosum*. It would appear that this disease may attack the mucous membrane of the mouth without any evidences of cutaneous lesions. Lukasiewicz<sup>1</sup> reports two cases in which spots varying in size from a pin-head to a pea were present on the lower lip, cheeks and gum. Vesicles and superficial ulcerations appeared on the soft palate. In two other cases the skin and mucous membranes were simultaneously attacked. I have had under my own care two similar cases, in one of which there has been two attacks occurring in the spring of the year. Lukasiewicz bases the diagnosis of the mucous membrane cases upon the acuteness of the attack and the superficial character, the peripheral extension and the early erosion of the lesions.

Osler believes that cutaneous symptoms may be altogether absent, visceral disorders alone being present.

I am quite convinced that herpes iris and erythema nodosum rightly belong to this group of affections, although it is the custom with some writers to consider them as substantive affections having nothing in common, or only distantly connected, with erythema multiforme.

### Herpes Iris.

The eruption usually occurs on the backs of the hands and feet, especially the former, and is generally symmetrical. The eruptive patch makes its appearance as a vesicular lesion on an erythematous base; the central vesicle increases in size, and at its periphery presents an extending red areola, which in turn is elevated by fresh effusion into an annular ring, the original vesicle in the meantime undergoing absorption, and leaving in its place a purplish discoloration. Here the process may come to an end, or else other concentric rings, vesicular or erythematous, may continue to form, and in the end attain considerable dimensions. The various shades of color thus produced are the justification of the term *h. iris*. Sometimes the

<sup>1</sup> Wiener klin. Woch., 1896, ix. 23. Abstracted in the Jour. Cutan. and Genito-urin. Dis., March, 1897.



eruption advances no further than the erythematous stage (*c. iris*), or, going a step beyond, gives rise to the condition just described (*h. iris*); or, the effusion being more intense, the central vesicle develops into a bleb, and obscures the concentric rings (*pemphigus iris*).

Under some circumstances, when the eruption is general, all forms and abortive varieties may be present at the same time.

There may be one or several patches, or indeed the eruption may be well-nigh universal, even the mucous surfaces being implicated. The disorder tends to disappear spontaneously in two or three weeks, in the interval, however, being kept up by successive outbreaks. This form of erythema multiforme is apt to recur annually, particularly in the spring and fall, and attacks mostly children and young persons of both sexes. The subjective symptoms are not prominent, and consist mainly of slight burning and itching.

### **Erythema Nodosum.**

This form of eruption is comparatively rare, occurring but 247 times in 204,866 cases of skin disease collected by the American Dermatological Association. Before the eruption appears, there are usually well-pronounced prodromic symptoms in the form of malaise, fever, rheumatoid pains and sometimes sore throat. The lesions come out in two or three successive crops, and consist of discrete, nodose, painful, inflammatory swellings, varying in size from a small nut to an egg and larger. In some cases they are tolerably well-defined, but generally not, have a firm, tense feel at first, but become softer as they decline. At their first appearance they are of a red color, sometimes reddish blue, but in the course of their evolution the lesions may assume the various hues of a bruise. Suppuration never occurs, although the aspect is strongly suggestive of pus, and occasionally the nodes have been unwittingly cut into. The usual site of the eruption is upon the front of the legs, although it may appear else-



where. In a case at present under observation the lesions are scattered indifferently over the lower limbs. The disorder may last altogether from two to four weeks. *E. nodosum* occurs mostly in young persons, and females are more frequently attacked than males. The mucous membranes may be implicated. A form of the disease has been observed that occurs in young tuberculous persons.

Erythema multiforme is more frequent in the spring and autumn than at other times, and attacks by preference young persons, that is, between the ages of ten and thirty—exceptions occurring at both extremes of life—and is said to be more common in females, which is certainly true as regards *e. nodosum*. Recurrences are frequent. I know of many people in whom the disease comes back about the same time every spring. Among the apparent causes of the various forms of the malady may be mentioned changes of temperature, and disorders of digestion, and, besides, as regards *e. nodosum*, Mackenzie's statistics would seem to show a frequent connection with rheumatism. My friend, Dr. Glasgow, of this city, has pointed out to me, that at times the weather has a peculiar "epidemic constitution" during which catarrhs, pneumonia of a peculiar type, a certain kind of sore throat and rheumatism prevail, and coincidently an eruption of various forms of *e. multiforme*. Admitting, however, that there is a specific condition of affairs—and of this, I think, there is little doubt—that brings about these manifold morbid expressions in the various tissues of the body, there is no question that for *e. multiforme* in general there are various and distinct etiological factors, the disease being symptomatic of the most varied nervous, toxic and infectious agencies. The reason of its comparative infrequency in St. Louis is, I believe, due to the fact that we do not have the sudden changes of weather common to the seaboard and the great lakes. In my work on vaccination<sup>1</sup> I pointed out that *e. multiforme*, especially *e. tuberculatum*, was not uncommon in my experience after revaccination.

<sup>1</sup> *Essentials of Vaccination*, 1882, p. 55.



Taylor and others have seen cases in which *e. multiforme* appeared in the early and exanthematic stage of syphilis.

**DIAGNOSIS.** There is scarcely any other disease of the skin that creates so much alarm on the part of the inexperienced as a well-developed case of *erythema multiforme* involving large surfaces, and presenting the various lesions of the disease; but one is immediately struck by the fact that the subjective sensations do not at all correspond to the apparent gravity of the eruption. This is a feature of value in the diagnosis. *E. multiforme* is to be distinguished from *urticaria* in that the eruption in the former is not so ephemeral, the itching is much less intense, the lesions are more protean in character and of a deeper red color; in addition, it must be remembered that the rash of *e. multiforme* may leave behind a certain amount of desquamation and pigmentation. In *eczema papulosum* the papules are small and pointed, persistent and very itchy; in *e. multiforme* they are much larger, irregular in size and contour, and attended by little pruritus. *Herpes iris* is exceedingly infrequent, and its features are so salient, that a difficulty in diagnosis could scarcely arise. It is possible to mistake *e. nodosum* for the nodes of syphilis, but in the latter disease the concomitant symptoms and the history of the case should arouse suspicion, and the fact of ulceration, if it occur, would point to the specific nature of the latter affection.

**TREATMENT.** The internal treatment must be conducted on general principles, with a view to relieving exciting causes and complications. Villemin recommends as a specific the iodide of potassium in ten-grain doses, three times a day. If the patient is constipated, and has a furred tongue, the *mistura ferri acida* is an excellent remedy, given in the dose of a tablespoonful in a large glass of water before breakfast. In anæmic subjects, tonics and cod-liver oil may be administered with benefit. Locally, the calamine and zinc lotion, to which may be added one-half drachm of carbolic acid to each eight ounces, is agreeable and beneficial.

In *e. nodosum* the legs, if affected, should be kept ele-



vated, and a lead lotion kept constantly applied. E. tuberculatum about the hands is best treated with the modified diachylon ointment spread on muslin and kept in place by a bandage.

### ERYTHEMA ELEVATUM DIUTINUM.

Under this title Crocker<sup>1</sup> describes a rare form of skin disease characterized by erythematous, raised and persistent lesions, which are situated on the palmar and dorsal surfaces of the fingers, on the elbow joints and the buttocks. A lesion on the right index finger occurring in a girl of six years is thus described: The patch was raised  $\frac{1}{8}$  of an inch, convex, sharply defined, pale purplish red in color, with a few dilated vessels over it, somewhat whiter on pressure, but diminishing very little in size; firm to the touch, very tender, but not painful except when pressed upon. There was no burning or itching. In this same case the lesions on the back of the hands were distinctly nodular, those on the palmar surfaces were more diffused as a result of coalescence of the component nodules. The affected parts were hotter than normal, slightly scaly here and there, but mostly quite smooth. The treatment instituted was liquor arsenicalis and tinctura lupuli internally and the local application of liquor carbonis detergens diluted with water (5j-5j). Rapid improvement set in after some weeks, and the disease disappeared for the most part, leaving behind some purplish brown staining. Certain other probably analogous cases have been reported by Bury and Hutchinson. Crocker is uncertain as to the propriety of recognizing an identity between his and Bury's cases and those of the Hutchinson type, which latter presented certain differences as regards the age and sex of the patients, being males and in middle life, and the character of the lesions. The patients seen by Crocker and Bury were all females, and the disease began in childhood or early youth. Gout and rheuma-

<sup>1</sup> Brit. Jour. Derm., Nos. 63 and 64, vol. 6. With colored plates.



tism seem to act as predisposing causes. It appears to be a chronic inflammatory process with development of fibrous tissue.

### ERYSIPELAS.

Erysipelas is an acute contagious inflammation of the skin and subcutaneous tissue, which is due to the presence of micrococci, and characterized by certain well-pronounced local and general symptoms.

The disease may be conveniently divided into the simple and phlegmonous.

The dermatologist is especially concerned with the simple or cutaneous form of the malady. Before the local disorder appears there is generally some degree of feverishness, or even a distinct chill followed by elevation of temperature. The degree of the fever and its duration will depend upon the severity of the local manifestation. The disease is apt to commence about one of the mucocutaneous outlets of the body, such as the nostrils, angles of mouth, the eyelids, especially the inner canthus, the meatus of the ear, or it may begin in a mole or wart. The initial spot is of a rosy-red color, and this gradually enlarges and creeps forward on the skin with a border that is sharply defined from the contiguous healthy skin, and appreciably elevated. The affected surface is swollen, especially in regions where there is much loose cellular tissue, *e. g.*, under the eyes, is hard to the touch, presents a tense and shining appearance, and after a while the rosy-redness is replaced by a duskier hue, which may in severe cases become livid. If the inflammation is very active, vesicles and blebs form over the patch, which, at first clear, finally become semi-purulent and dry up into crusts. If the contents of the blebs are hemorrhagic, it must be looked upon as of unfavorable omen.

As the process advances, the redness of the peripheral extending portion will maintain its integrity, but the central area will begin to fade. Sometimes it may be noted that the outlying parts of the skin will display rounded, reddish



patches, that become gradually merged into the original lesions, indicating, as has been supposed, the implication of the lymphatics in the spread of the disease. The affection may spread widely, the whole surface of the body being involved, or it may take in only a limited region. Inflammation of the lymphatic vessels and glands is also present, and this symptom may be apparent even before the outbreak on the skin. The subjective sensations experienced by the patient are generally those of itching, tingling, burning and a feeling of great tension. Spontaneous pain may be entirely absent, but the parts may feel quite sore to the touch, and in some cases marked hyperæsthesia is present. The degree of fever will depend to a great extent upon the local inflammation, and its disappearance coincides with the subsidence of the latter. At the conclusion of the local process desquamation in large or small scales ensues. Erysipelas occurs in all grades of severity, and the process may last from a day or more to three weeks or even longer. Sometimes one attack is speedily followed by another, and in a very mild form of the disease occurring on the face, relapses develop with great frequency.

Phlegmonous erysipelas is a much more severe variety of the disease, and differs from the simpler form in the greater intensity, both local and general, of the process as a whole. Purulent infiltration and sloughing of the tissues generally occurs.

It is now admitted that the essential cause of erysipelas is the invasion of streptococci (Fehleisen). This fact puts beyond dispute the clinical observation as to its contagiousness, and establishes the conclusion that the mode of entrance for the micro-organisms is by the way of a wound, abrasion, or "from some preëxisting cause of inflammation" (Billroth). We must, moreover, for many cases, suppose a susceptible soil, and consequently in practice we are able to recognize certain predisposing influences, *e. g.*, various conditions of vitiated health, as Bright's disease, intemperance, bad hygienic surroundings,



etc. The disease bears a closer resemblance to the malarious than to the zymotic affections in that one attack does not protect from another, but rather the reverse.

**DIAGNOSIS.** Cutaneous erysipelas is usually readily diagnosticated. Occurring on the face it is most apt to be confounded with erythematous eczema, and that this mistake is often made, even by surgeons of experience, is a matter of common observation. The points of difference are pointed out under the head of eczema.

**TREATMENT.** In mild cases of the disease internal medication is rarely called for; in more severe attacks the strength of the patient must be kept up by suitable nourishment and, when adynamic symptoms set in, by appropriate stimulation. The tincture of the chloride of iron has been looked upon as almost a specific, given in large doses, from 20 to 60 minims, every few hours, day and night. It must be said that experience as to its utility widely differs. Da Costa extols the fluid extract of jaborandi, or pilocarpine  $\frac{1}{4}$  gr. hypodermically, but warns against its use in debilitated subjects, or those having a weak heart. Aconite and belladonna have their adherents. Phenacetine is valuable when the fever is high. Like all diseases that run a variable course, the results of treatment, both local and internal, in erysipelas are very variously interpreted, and the sources of fallacy are numerous. The greatest number of local applications have been employed, but lack of space forbids their enumeration. The disease apparently may be jugulated by many remedies. I believe the best plan is to use some preparation that will thoroughly protect the part from all sources of external irritation, and that will give the most comfort to the patient. Among such remedies may be mentioned the white paint applications of Barwell, the use of flexible collodion and the chalk ointment of Duckworth. This latter is made by mixing together equal parts of benzoated lard and prepared chalk, the lard being first melted, and then adding to each ounce thus prepared one-half drachm of pure carbolic acid. This should be thickly smeared on,



and covered with a piece of boracic lint. An application recommended by Unna, and which I have found serviceable, is as follows :

R.	Ichthyol.,	
	Aetheris,	āā ʒj.
	Collodii flex.,	ʒij. M.
S.	Apply with a camel's hair brush.	

White highly recommends in facial erysipelas a lotion of carbolic acid, one drachm, to alcohol and water, of each eight ounces. This should be applied on cloths and renewed every alternate hour. A poultice made by dipping a thin layer of absorbent cotton in a 2½ per cent. solution of carbolic acid makes one of the most agreeable and useful applications in erysipelas. The cotton should be covered with rubber tissue. Among the mechanical modes of treatment may be mentioned the compression with adhesive straps along the extending border of the disease, and the Kraske-Riedel scarification method. Efforts at limiting the spread of erysipelas by solutions of nitrate of silver, tincture of iodine, etc., are perhaps only useful in those cases that naturally limit themselves.

**PROGNOSIS.** The prognosis of cutaneous erysipelas is generally favorable; but serious complications may arise in the simplest cases, and the gravity of the disease is increased if it occur in connection with preëxisting disorders. Erysipelas of the head and neck may prove dangerous from cerebral complications, or implication of mucous surfaces.

### ERYSIPELOID.

According to Rosenbach erysipeloid is a disease due to wound infection with foul animal matter. It is particularly found in butchers, dealers in fish, cooks, tanners, etc., and as a consequence is usually observed upon the hands.

The affection begins, with some degree of itching, as a red spot that gradually advances over the surface, but as it extends peripherally, the central portion undergoes involu-



tion, and in this way rings and half-circles are produced. The lesion is but slightly elevated, although clearly defined against the healthy skin. The surface over which the disease process has marched is left apparently normal, and shows no desquamation or other secondary effects. Erysipeloid is without systemic reaction, and tends to spontaneous recovery in one or two weeks. According to Elliot the disease is to be distinguished from erysipelas, ringworm and erythema annulare. The same authority recommends as a perfectly satisfactory treatment the application of diachylon ointment to which has been added from 15% to 25% ichthyol.

### PELLAGRA.

This is a serious endemic affection, which is met with principally in Italy. It is due, according to some observers, to the drinking of spirits manufactured from maize, while others regard it as being caused by the eating of diseased or spoiled maize. Women and children rarely suffer from pellagra, males being the principal victims.

In addition to the cutaneous symptoms, which consist of an erythematous rash on the backs of the hands and feet, there are gastric, intestinal and cerebral complications. Improvement in all the symptoms occurs in winter, but the patients grow worse again towards the spring.

The disease is very chronic in its course, lasting years, and unless treated early the prognosis is altogether unfavorable.

### ACRODYNIA.

Acrodynia or epidemic erythema is thought to be related to pellagra, and has been principally observed in France, first in 1828, but since that time has been recognized in other European countries and in the East. The eruption is preceded by nausea, vomiting and intestinal disturbances, injection of the conjunctivæ, œdema of the face, aching and numbness of the extremities, and various disturbances of cutaneous sensibility.



The rash itself, which consists of erythematous patches, sometimes commingled with papules and blebs, comes out on the palms and soles, occasionally spreading over the limbs to the trunk. The epidermis exfoliates in large lamellæ, and leaves behind a blackish discoloration, especially in moist, warm localities. Parietic symptoms and atrophy of the limbs are sometimes noted in severe cases. The disorder usually continues from two to four weeks, and relapses are not infrequent. The etiology is unknown. The treatment is symptomatic.

### FURUNCULUS.

A furuncle is an acute, circumscribed, phlegmonous inflammation occurring around a skin gland, or follicle, that terminates in suppuration, and the expulsion of a central slough, or core.

A boil may commence with a slight itching sensation, and presently there will be noticed a little pimple, that is even at this time quite painful. Within perhaps twenty-four hours the lesion becomes more elevated, more tender, of a conical shape, and is surrounded a little later by a zone of reddened skin. At the apex of the swelling a point of suppuration is soon detected, and in a week or ten days the boil matures, or becomes ripe. The pain, which at the beginning was of a pricking character, becomes a dull ache, accompanied by a constant throbbing, and an uncomfortable feeling of tension. These symptoms are apt to be increased in severity at night.

If pressure is made on a boil before it is mature, a little pus and blood will escape; but later, when the abscess bursts of itself, or is opened by the knife, the core becomes visible, although it does not, even at this time, come away with ease. So soon, however, as the core is extruded, the boil quickly heals, leaving in its wake a violaceous discoloration, and after awhile a minute cicatrix. Boils vary much in size; some are no larger than a coffee bean, while others may be of the diameter of a silver quarter-dollar.



Some boils also run their course more rapidly than others. When a core does not form, it is called a blind boil.

Furuncles may occur singly, or there may be present several at the same time; often, unfortunately, the morbid condition is kept up for weeks or months by a succession of crops.

While there is generally very little constitutional reaction, when the so-called furuncular diathesis is established, there may be, especially in children, great restlessness, loss of sleep, anorexia and emaciation resulting from the constantly recurring pain and free discharge of pus.

Boils may appear anywhere on the body with the exception of the palms and soles, but they have a special tendency to develop on the back of the trunk, and also frequently in children in the axillæ and along the borders of the lids (styes). They also may attack the ceruminous glands of the ear, in which situation they are excessively painful.

Boils always begin around the hair follicles and the sebaceous and sweat glands, and there is reason to believe that the inflammation is set up by the entrance of pus-cocci into these openings. According to the researches of Bockhart, the micro-organisms gain admittance either through the ducts of the sweat glands, or through the openings of the hair follicles and sebaceous glands, or through abrasions or injuries to the skin. If they do not penetrate into the cutis simple impetigo is the result; if they pass vaguely into the cutis through some lesion in the epidermis a skin abscess is the consequence; but if they pass along the duct of a sweat gland, or penetrate down the lumen of a hair follicle, the process of suppuration is much more severe, and gives rise to the formation of a furuncle, of which the suppurating gland or duct forms the core.<sup>1</sup>

The micro-organism producing boils is the *staphylococcus pyogenes aureus*. When boils occur singly it will often be found that they have been evoked by some local irritation, *e. g.*, the pressure of ill-fitting instruments, prolonged de-

<sup>1</sup> Monatshefte für prakt. Derm., No. 10, 1887.



cubitus, or the tearing of the skin by a frayed or unusually rough garment.

It is a thoroughly well-recognized matter of experience, that furuncles occur in connection with a variety of constitutional states of a depressing character ; for example, in diabetes, after variola, measles, scarlatina, etc. It is also a common observation that certain local pruritic disorders of the skin are commonly accompanied, or more often followed, by boils. Thus v. Rittershain states that after the exfoliative dermatitis of infants they are very frequent ; and the furunculosis that occurs as a sequel to eczema is very annoying and often protracted.

In the hot summers of this section of country children are very subject to prickly-heat, which is often accompanied by crops of furuncles.

Children of some age are perhaps more liable to furuncles than infants, and it would seem that young boys are especially prone to them about the neck and back, while at the same time being in no appreciably bad state of health. There is no ground for believing that a superabundance of good health predisposes to boils, as was formerly believed, although it is incontestable that physical well-being is no bar to their acquisition.

Boils would sometimes seem to occur epidemically, spreading through families and schools, and there is no doubt that pus from them is contagious, as was pointed out by the late Mr. Startin.

**DIAGNOSIS.** The diagnosis offers few difficulties. A boil may be distinguished from a carbuncle by its smaller size, its more pointed shape, and its single point of suppuration ; whereas a carbuncle is generally solitary, is much flatter and larger than a boil, has an indurated border, and, in addition to its multiple openings, the overlying skin is completely destroyed. Boils should also be differentiated from the pustular syphilide and the eruption of ecthyma.

**TREATMENT.** Whatever view is taken of the furuncular process, it is the manifest duty of the physician to put his patient in the best possible condition of health.



If it is thought that sewer gas or arsenical wall papers are causative factors, these should be removed and remedied. All local sources of irritation should be sought for and corrected. The dyspeptic, the anæmic, the strumous should each receive appropriate treatment.

Very often change of scene and air is highly beneficial. There are certain remedies, that, given internally, are presumed to have some specific effect on boils. Yeast is an old-fashioned "cure," that sometimes seems to exert a beneficial effect. An adult may take a half wineglassful night and morning. Bulkley extols the hyposulphite of sodium. The sulphide of calcium has been lauded in furunculosis. Although I have made use of this drug almost in a routine way for the last twenty-five years, I am still unable to affirm positively that I have seen any constant or certain effect from it. It seems to me that, at times, suppuration is hastened in those taking it, but I have never known it to put a stop to the furunculosis. I have had far better success with the syrup of the hypophosphites, and in strumous children I have made much use of an emulsion of cod-liver oil, hypophosphites, pancreatin and the syrup of the lacto-phosphate of lime. La Gendre and Bouchard claim to have arrested furuncular eruptions by intestinal antiseptics. Dilute sulphuric acid in 10 to 20 drop doses, well-diluted, every 3 or 4 hours is much employed in St. Louis, and, it is claimed, with excellent results.

It is well to endeavor to prevent, or at least limit, suppuration as much as possible; but when this cannot be accomplished it is advisable to hasten maturation and treat the abscess cavity on antiseptic principles. To secure the first object various methods have been suggested. Bidder, following Hueter, employs a 2% carbolic acid solution with which he makes one or more injections according to the size of the boil. Theoretically, the method is excellent, but its practical execution is very painful and annoying. L. Heitzmann strongly recommends an eight per cent. salicylic acid plaster or salve. Gingéot's favorite application



is the tincture of iodine. It must be put on in successive layers, and allowed to encroach a little upon the healthy skin. He advises also that all other cutaneous lesions be similarly treated to prevent their development into furuncles.

Loewenberg makes use of a saturated solution of boracic acid. Verneuil advocates a two per cent. phenic acid spray.

The following application is recommended by Halle and Jamieson :

R.	Tr. iodini,	℥j.	
	Acidi tannic.,	℥ss.	
	Pulv. acaciæ,	℥ss.	M.

My friend, Dr. H. Tuholske, recommends the introduction of the electrolytic needle as very efficient in aborting boils. When the lesion is penetrated by a hair, the latter should be plucked.

Of late, my own plan of treatment has been to apply to the furuncle a piece of Unna's carbolic acid and mercury plaster mull, cut so as to cover the lesion, and project a little beyond. Often this procedure will cause the boil to abort.

On no account should poultices be made use of to encourage suppuration : they always do harm, and seem to provoke new crops. Nothing succeeds so well in my experience as the Unna's plaster just mentioned in hastening suppuration, when pus has already formed. After a few hours of its application, it will generally be found that the slightest prick with a knife or needle will cause the pus to well out. A small hole may be cut in the center of the plaster, corresponding to the apex of the boil. An ointment of one drachm of iodoform to an ounce of unguentum vaselini plumbicum will often have a good effect on the pain.

Squeezing and other manipulations should be avoided.

After the furuncle has burst, the cavity should be dealt with antiseptically, the best agents being iodoform, iodol,



or carbolized oil. Crocker says that sweat gland boils are best treated by painting on a layer of collodion. During the whole course of the treatment, especially in generalized boils, it is advisable to smear the skin around and between the boils with an antiseptic ointment.

R.	Acidi boracici,	ʒi.
	Zinci oxidi,	ʒi.
	Pulv. amyli,	ʒiij.
	Vaselini,	ʒi. M.

For boils occurring in crops Van Hoorn recommends that the entire skin be washed with warm water and soft soap. The boils themselves and the adjacent skin is mopped with a 1-1000 bichloride solution. The boils are covered with a carbolic acid and mercury plaster, and the patient puts on fresh underclothes. Twice a day new plasters are applied, and, if the boils have opened, the pus is gently pressed out and the region about washed with the bichloride solution.

My friend, Dr. Spencer, has kindly prepared for me the following note on the treatment of auditory furuncles:

“Treatment should have regard to the alleviation of pain, to resolution and to prevention of the occurrence of others, to which there is liability. These indications are all met in the application of alcohol and campho-phenol (55 and 45%)—based upon the micro-organism origin of the disease—together with compression. The pain occasioned by this treatment is of short duration and is readily borne, as the relief which it procures is of such manifest character. From two to five such applications, the patient being seen daily, will ordinarily suffice.

“The knife will seldom be required except in those cases where the indications for its employment are very apparent at the first visit: and poulticing, syringing, the instillations of warm water or drops of any character are to be condemned, entering largely, as they do, as factors in the production of this form of ear disease. The resilience that there is in absorbent cotton, at the same time with its absorptive



property, constitutes it the best material out of which to make the compress. Pressure that is brought to bear uniformly upon all the walls of the canal prevents the development of furuncles by its influence upon the circulation at the same time that it operates upon those which have formed, to promote resolution on the culmination of their discharge.

“The after-treatment should look to the removal of the local cause, if this has existed in the form of inflammatory trouble, whether of the meatus or tympanic cavity. The yellow oxide of mercury inunction is valuable as a means of stimulating the glands to normal secretion.”

PROGNOSIS. The prognosis of boils is usually good. When they occur in crops, even if the patient is otherwise well, they may prove very persistent, and even appreciably depress the general health. When boils appear in connection with serious systemic disorders, their presence materially increases the sufferings of the patient.

### CARBUNCULUS.

A carbuncle is an acute phlegmonous inflammation which terminates in sloughing of the tissues. Carbuncle occurs most often on the back of the neck, back, shoulders and buttocks. A carbuncle begins as a firm, flat infiltration in the skin, which increases by extension in depth as well as by extension of the borders. A carbuncle may only be an inch in diameter, while, on the other hand, it may attain such proportions as to cover the whole back of the neck and shoulders. The color is in the beginning a bright red, which changes to a bluish tint. The infiltration of the skin caused by a carbuncle is at first of a peculiar brawny character. By the end of ten days or two weeks the apex of the carbuncle softens and opens at several points. A small amount of sanious pus is evacuated, and through the crater-like openings may be seen grayish sloughs. The sloughs are gradually got rid of through the enlarged openings, the intervening bands of tissue often melting away, and there results a deep ir-



regular ulcer with hard everted borders. This slowly fills by granulation. At times, instead of several openings, the entire skin over the central part of the carbuncle becomes black and gangrenous or breaks down in a grayish slough. Usually only one carbuncle is present upon the body at a time. During the formation of a carbuncle there is much pain of a burning character and constitutional disturbance, which in the aged or debilitated may become of serious import.

Carbuncle most often occurs in those who are already in poor health from other causes. There is an especial association between carbuncle and diabetes mellitus. It has been supposed that trauma often stands in an etiological relation, but this has not been proved. The ordinary pus-cocci play an important part in the etiology of carbuncle, the disease being usually due to their presence.

According to Warren, the peculiar cribriform arrangement of the openings of a carbuncle is due to the anatomical construction of the skin in those parts which are most often attacked. The inflammation occurs in the subcutaneous tissue under the thick fibrous layer which exists, especially on the back. The products of inflammation pass up along certain columns of fat into the papillæ, whence they rupture through the undermined epidermis.

**DIAGNOSIS.** If the points mentioned in the description of carbuncle are borne in mind, it is not likely to be confused with any other disease.

**TREATMENT.** All the defects of health must, as far as possible, be corrected. As there is often much depression of the vital forces, it may be necessary to institute a supporting treatment from the beginning. When stimulation is deemed advisable, some form of alcohol will be found most reliable. It will sometimes be necessary to give morphia on account of the severity of the pain. The use of sulphide of calcium is highly recommended by some on account of its supposed power to limit suppuration.

Locally, quite a variety of methods has been advised, from heroic surgical procedures, such as crucial incision



followed by scraping with the sharp spoon, to the use of medicinal applications. Hypodermic injections of a 10 per cent. solution of carbolic acid into the affected tissue, if made early, will sometimes abort the disease. Cotton compresses, soaked in a 5 per cent. solution of carbolic acid and covered by rubber tissue, generally afford relief and often seem to limit the inflammation. Another good dressing is an ointment of a drachm of iodoform to the ounce of unguentum vaselini plumbicum, spread on cloths and applied to the carbuncle. Crocker recommends that at first glycerin of belladonna spread on lint be used, and later unguentum resinae be applied till suppuration has set in; as soon as the openings have formed they should be syringed out with a carbolic solution, and then filled with iodoform and a moist dressing applied. When the sloughs are slow about separating, and especially if there seems to be much septic absorption, an incision should be made and the sloughing tissue removed with scissors and the sharp spoon. The wound should then be dressed antiseptically. If there is much pain in a carbuncle from tension, there is nothing which will relieve the pain so promptly as an incision.

**PROGNOSIS.** When a carbuncle of ordinary dimensions occurs in a person of robust health, the prognosis is good. With increase in size of the carbuncle the prognosis becomes more grave. In the aged and the debilitated carbuncle is always a dangerous malady. When the affection occurs about the head the prognosis seems to be worse than for carbuncle of other regions.

### MALIGNANT PUSTULE.

Malignant pustule is a gangrenous affection of the skin, usually appearing upon an exposed portion of the body, and due to an inoculation with virus containing the bacillus anthracis, which is derived from some animal infected with splenic fever. There are two varieties of anthrax, internal and external, due to the mode of inoculation.



When it occurs through the alimentary tract by ingestion of flesh, butter or milk of infected animals, or through the pulmonary tract, it produces internal anthrax, a rapidly fatal septicæmia, which runs its course without any external manifestations. External anthrax or malignant pustule occurs chiefly in butchers, tanners and woolsorters, persons who handle the flesh and hides of infected animals. Flies may convey the virus from animal to man.

Generally from one to three days after inoculation, a red itching or burning papule forms, upon which a bulla or pustule soon develops. The bulla or pustule ruptures, exposing a black, gangrenous surface. A crop of vesicles appears around the border of the slough, the skin being red, indurated and greatly swollen, while the neighboring lymphatic vessels and ganglia become enlarged, the latter sometimes suppurating. The gangrenous process may spread rapidly, being accompanied by the symptoms of acute septicæmia, and cause death in one to six days.

In favorable cases the slough is cast off, and the loss of tissue replaced by a cicatrix.

**TREATMENT.** The most radical treatment consists in early excision combined with the administration of tonics and stimulants. Injection of iodine and carbolic acid beneath the eschar, and various methods of cauterization have also been recommended.

### EQUINIA.

This disorder, commonly called glanders, is an infectious parasitic disease, that in men is usually the result of inoculation from the horse or ass, and is characterized by general and local symptoms. The distinction between farcy and glanders is not well grounded, since the former is in reality only the cutaneous expression of the general disorder.

The acute disease in man is ushered in by certain prodromic symptoms such as malaise, and pain of a rheumatic character in the joints and limbs. Fever is frequently absent at first, but as the pains increase in severity fever of



an intermittent or continued type appears. In the beginning it is often thought that the patient is suffering from acute rheumatism or typhoid fever, especially if no wound of the skin has taken place. If the specific agent has gained entrance through a lesion of the cutaneous surface, local pain is experienced, together with erysipelas-like redness of the part, and involvement of the contiguous lymphatics. Meanwhile the initial ulcer enlarges, discharges a sanious, offensive pus, and takes on a chancroidal aspect. Later on, erythematous spots come out on the skin, which become converted into variola-like pocks, and sometimes into large blebs. The pustules, which are about the size of a pea, burst and pour out an offensive, sanguino-purulent discharge. On the other hand, large, projecting tumors and abscesses may develop, that are at first hard and painful, but subsequently become doughy, fluctuate and break down into extensive, corroding ulcers, that penetrate the tissues and expose the bones and tendons. The various skin lesions may occupy the entire surface, which, together with swellings of the joints, present a most horrible picture of suffering. In addition to lymphatic involvement at the site of inoculation, the vessels and glands in other parts of the body become implicated, and, according to circumstances, may undergo resolution, or else suppurate and produce other ill-conditioned ulcers.

The cutaneous phenomena may develop in from twenty-four to forty-eight hours, or they may not appear for from two to four weeks, being preceded by a nasal discharge, and certain ill-defined general and local symptoms. Glanders affecting the mucous membrane of the nose is less frequent in man than in the horse; but when this region is implicated, swelling of the organ supervenes, accompanied by marked pain, and the discharge, which at the outset was thin and viscid, becomes purulent, bloody, and of a disagreeable odor. Pustules and ulcers form on the mucous surface, and in malignant cases erosion and perforation of the bone ensues. Catarrhal, inflammatory and ulcerative processes also take place on other mucous membranes,



such as the eye, the mouth, fauces and the entire respiratory tract. In malignant cases the patient succumbs in a few days, overwhelmed by the intensity of the process, or he may live on for several weeks, finally dying of collapse.

In chronic glanders, if the specific agent has entered some exposed portion of the body, the local phenomena are the same as in the acute form, and, under other circumstances, the constitutional symptoms are also similar. It would seem, however, that the stress of the disease is laid upon the skin and other tissues of the body, and that the affections of the nose are absent in at least one-half of all the cases, while it is invariably present at some time in the course of the acute and subacute cases. Chronic glanders may last from a few months to ten or eleven years (Bollinger), about 50 per cent. of those attacked ultimately recovering.

The disease is due to a specific micro-organism, the glanders bacillus, which closely resembles the tubercle bacillus, and which has been successfully inoculated from pure cultures. Glanders, when occurring in men, is nearly always found upon those engaged with horses. The virulent secretions either gain entrance through a wound or abrasion of the skin, or else by way of the mucous surfaces.

**DIAGNOSIS.** In a case of acute glanders that is fully developed the various marked symptoms, such as the tumefactions, pustules, blebs, ulcers, lymphatic involvement, nasal discharge, etc., should be sufficient to establish a diagnosis, especially if the patient's occupation or habits are taken into consideration. Recognition of the nature of the affection is made easier if the disease has arisen from direct inoculation; when this has not been the case, more difficulty will for a time be experienced. In chronic glanders, especially in the cutaneous form (farcy) care should be taken to exclude pyæmia, syphilis and tuberculosis. Inoculation of the secretions upon some of the smaller animals will always suffice to clear up a doubtful case.

**TREATMENT.** In addition to the immediate destruction of the inoculated surface, when such exists, by strong caus-



tics, the general and local treatment should be based on the ordinary principles of medicine and surgery. In a general way the hyposulphite of sodium might be given in large doses with some hope of benefit.

### IMPETIGO.

The older dermatologists recognized impetigo as a distinct affection ; but Hebra would not regard it as an independent pustular disease, and in the present bacteriological era most authors look upon all the varieties as due to pyococci and refuse to make any clinical distinctions. As a matter of fact, impetigo is seen as a complication of many dermatoses, such as eczema, scabies, etc., and also in what may be termed a sporadic way, but nevertheless we encounter certain pustular disorders, namely, ecthyma and impetigo contagiosa, which seem to be disorders *sui generis*. Moreover, Duhring would add to this class a form of disease known as impetigo simplex, of which the following account is taken from that observer.

#### Impetigo Simplex.<sup>1</sup>

Constitutional symptoms may or may not precede the cutaneous manifestations ; when present, however, they are slight, and consist of malaise, indifferent appetite and constipation. The lesions on the skin consist of one or more pustules, varying in size from a split pea to a finger nail, rounded, prominent, having thick walls, and surrounded by a more or less pronounced areola. There is no umbilication, but the pustules are tense, discrete, from an eighth to a quarter of an inch in height, without surrounding infiltration, and have yellowish or whitish contents. They show no inclination to rupture, nor do they have a tendency to coalesce. In number they vary from two or three to a dozen or more, and may occur upon any part of the body, but particularly about the face, hands, fingers, feet, toes, palms and soles.

<sup>1</sup>See Duhring, Am. Jour. Med. Sci., Oct., 1888 ; Roberts, Brit. Jour. Derm., May, 1895.



Subjective symptoms are as a rule absent. The disease runs an acute course, lasting several weeks. The lesions appear suddenly, and come out one after another during the first week of the attack. Having attained maturity, the pustules remain unchanged for a day or two, but subsequently become altered, sometimes hemorrhagic, and then undergo absorption or crusting. If accidentally ruptured, a thin, puriform fluid is exuded. The amount of crusting varies; sometimes it is abundant, or again entirely absent. When the crusts drop off, the surface is seen to be reddish, but without scar or pigmentation. Relapses are said to be unlikely. In adults the eruption is located upon the hands and fingers.

Children between the ages of three and ten are the usual subjects of the disorder, and as a general thing the health is unimpaired. According to Duhring simple impetigo has not been recognized as contagious, but since it is undoubtedly due to pus-cocci it would be a singular exception to the general rule if its non-contagious character were fully established. I must confess that I have never encountered any eruption exactly corresponding to this disorder, but all clinicians have met with anomalous pustular eruptions that were difficult to classify, and since we now recognize positively the etiological value of pus infection an accurate classification is a matter of some indifference.

**DIAGNOSIS.** The main points of difference between impetigo and eczema are the following: The pustules of eczema are numerous, and tend to run together; in impetigo they are sparse. The lesions of eczema are small: those of impetigo are large and prominent. Eczema has a discharge feature, the pustules rupturing early, and shows abundant crusting; in impetigo they do not break, and crusting is relatively scant. Thickening of the skin is present in eczema, but absent in impetigo, as is also itching, which is a marked feature of the former complaint. Impetigo contagiosa bears some resemblance to the simple form of impetigo, but if it be remembered that the lesion of the former is in the beginning a vesicle or vesico-pustule,



similar to that of vaccinia, which characteristic it preserves more or less throughout, there will be little difficulty in the differentiation. The characteristics of the ecthymatous pustule (q. v.) should also be borne in mind in this connection.

**TREATMENT.** According to Duhring the affection tends to spontaneous recovery, and beyond opening the pustules as they appear, and the use of some mildly stimulating ointment, active measures will not be required. On the other hand, in my practice certain sparse pustular eruptions that I have encountered have not done so well on the expectant plan of treatment. In some cases careful attention to the diet and the administration of tonic remedies seemed to be needed, and especially the local use of parasitocides, particularly an ointment of iodoform or salicylic acid.

### **IMPETIGO CONTAGIOSA.**

This affection was first described by the late Mr. Startin and Dr. Tilbury Fox, although undoubtedly known to Willan, Thompson and others. It is an acute inflammatory, contagious disease, during the course of which appear vesicopustules or blebs, that dry into straw-colored, flat and granular-looking crusts. The eruption attacks children by preference, although occasionally it is met with in young adults. Sometimes an ephemeral fever precedes the outbreak on the skin, but other cases occur in which fever is entirely absent; it is said, however, that when fever occurs the eruption comes out in crops for about a week, but when unattended by this transitory elevation of temperature the cutaneous manifestations are more limited, and the course of the disorder is less definite (Crocker). The lesions on the skin begin as minute, discrete, acuminate vesicles that enlarge to the size of a split pea, or silver twenty-five-cent piece. The contents, which are at first serous, soon become sero-purulent. In a few days the lesions, which are flat or even sometimes umbilicated, dry to thin, granular straw-colored crusts, which, owing to the absence of inflammatory



halo, have the appearance of being "stuck on" (T. Fox). The eruption is most prone to attack the face and hands, and may consist of several or many discrete lesions, or, when closely set, these may coalesce and form patches. The process is a striking one, and in some of its features the crusted lesions look not unlike vaccinia. When the crusts fall off, the surface is red as if from a burn, and may continue in this state for quite a period. Scarring does not occur. The mucous membranes may occasionally be involved, although in the large number of cases that I have seen this accident has not happened. Itching is rarely present to any degree. In adults the lesions may not become developed, but remain as papules. The disease runs its course in from two to three weeks, although by repeated auto-inoculations it may last an indefinite time.

Certain variations from the usual type have been described. Perhaps the most common is the bullous form, in which large pemphigoid blebs are present, which often run together, producing gyrate lesions, and, sometimes healing in the center, extend peripherally by undermining the skin with fluid. In a case of Ulman's the trichophyton fungus was found, although otherwise the lesional features were those of impetigo contagiosa. So also the lesions may vary in size and in the structure of the crusts, the latter being thick and adherent. An arrangement in rings and circles has been noted. Schamberg<sup>1</sup> relates an interesting case of the sort. Micrococci were found in the crusts. It is also said that abortive papular and papulo-squamous types exist. The relationship of these various atypical eruptions must be received with caution, since we know that in thousands of observed cases the normal type has not been departed from, and it is more than likely that diverse microbial infections may be responsible for analogous yet differing cutaneous lesions.

Impetigo is undoubtedly contagious, and often occurs in distinct epidemics, affecting children almost entirely. In

<sup>1</sup>Jour. Cutan. and Genito-urin. Dis., May, 1896.



an epidemic that I had an opportunity of seeing last summer in a mining settlement, nearly every child in the place was attacked, but my attention was not called to a single adult case.

Notwithstanding the fact that impetigo is a comparatively common disease, its etiology and nature have not been satisfactorily determined. Some have regarded it as a disease *sui generis*, while others have looked on it as due to the inoculation of pus from any source. It is a disease of childhood, and is seen chiefly among the poor, although by no means exclusively, and occurs mostly in summer. Different observers have demonstrated the presence of fungi in the crusts, but their observations have not been uniform. The fact that the disease is seen in connection with vaccinia has often been commented upon, but this coincidence is accounted for on the theory of pus inoculation. Crocker's explanation of the febrile cases is ingenious. He states that when fever is an element, it is probably due to the entrance of the microbes into the circulation as in furunculi.

DIAGNOSIS. The size of the more or less umbilicated lesions, their discrete arrangement, their history and course, and the absence of itching, should prevent any confounding of this disease with pustular eczema; even when the lesions of impetigo contagiosa have run together a few outlying vesico-pustules will generally be present.

Simple impetigo, varicella and pemphigus should also be excluded.

TREATMENT. The treatment is simple and effectual, and consists in the application of the following ointment:

R.	Hydrargyri ammoniati,	gr. x-xv.
	Ung. aq. rosæ,	℥j. M.
S.	Apply to eruption after removal of crusts.	

PROGNOSIS. Untreated cases may persist for a long time, but under the simple plan of medication mentioned above a few days will suffice to effect a cure.



**ECTHYMA.**

In the disorder called ecthyma we find large, flat, somewhat flaccid pustules of a yellowish or yellowish red color, varying in size from a ten-cent piece to a silver quarter-dollar, and surrounded by a well-defined areola. Desiccation is rapid and when the brownish crusts are removed a slightly excoriated surface is revealed, which is covered with a yellowish secretion faintly tinged with blood. The legs and thighs, where the hairs are thickest, are the favorite points of attack. Marked pigmentation usually follows. It is rarely seen elsewhere than on the extremities and almost exclusively in males. The pustules appear in successive crops, and may continue, as do furuncles, for an indefinite period. I have never seen the acute form described by Tilbury Fox and Duhring, in which the eruption is said to be anticipated by a fever, which subsides upon the development of the pustules. A so-called "ecthyma of infants" is also described, which occurs in very young children and appears as a pustular and bullous eruption followed by deep ulceration.

It is either secondary to impetigo contagiosa, or to some pruritic disease, such as prurigo, scabies, pediculosis, and, in children, urticaria. Most writers ascribe the eruption to poor food, unhealthy surroundings, uncleanness and disorders of nutrition. It is closely allied to furunculosis and impetigo, being the result of inoculation with microorganisms, and, like the disorder just mentioned, ecthyma may appear not only in broken-down subjects, but also in persons in apparently good health, besides following in the wake of local irritations of all sorts. Leloir records instances of ecthyma occurring in connection with disorders of the nervous system.

**DIAGNOSIS.** Ecthyma should be distinguished from the large, flat, pustular syphilide. The crusts in the syphilide are thick and of a dark greenish color, and are heaped up; in ecthyma they are less bulky, of yellowish tinge, and are without the oyster-shell arrangement. Upon removal of the crusts from the syphilitic lesion an excavated ulcer,



having a punched-out appearance, and covered with a profuse puriform secretion will be observed; in ecthyma the ulceration is superficial, and the secretion is much more scanty. The large pustular syphilide is found upon the back, shoulders and limbs; the ecthymatous pustules may also occur in these situations, but they are more common upon the lower extremities. Finally, if the lesions are syphilitic, other evidences of the disease will generally be discovered.

**TREATMENT.** In patients who are manifestly suffering from debility, or present symptoms indicating any disorder of the general system, the physician must order tonics of iron and bark, and address his remedies to the organ or organs at fault. The diet should be regulated, cleanliness enforced, a sharp lookout kept up for pediculi, and the general hygienic surroundings improved, if possible. Locally, I have found an ointment of cold cream and white precipitate to give speedy relief.

℞. Hydrarg. ammoniati,	gr. xv.
Ung. aq. rosæ,	
Ung. zinci oxidi,	āā ʒss. M.

A little iodoform salve (iodoform ʒj; vaselini, ʒj) is useful when the eruption is sluggish.

**PROGNOSIS.** The prognosis of ecthyma is always good, recovery generally taking place in a few weeks under a judicious treatment.

### POMPHOLYX.

This disease was described independently by Tilbury Fox and Hutchinson, the description having been based upon observations made on the same patient. The first named writer called it dysidrosis, and the latter cheiro-pompholyx. Robinson, of New York, to whom we are indebted for original investigations in the same direction, entitled it pompholyx, which term has been accepted by Crocker as carrying with it no pathological significance.

Tilbury Fox wrote that "the disease in its slightest form



is confined to the hands, occurring in the interdigits, over the palms, and along the sides of the fingers, and on the plantar surfaces. It makes its appearance in those who habitually perspire freely, and the patients feel weak and depressed. The eruption consists of minute vesicles deeply imbedded in the skin, and are at first isolated. They do not readily burst, and when a few days old look like sago grains imbedded in the skin. The vesicles afterwards become more distended and raised. They are not pointed, but oval, eventually become faintly yellow in color, and run together and form bullæ. The hand is then stiff and painful. If the eruption is left undisturbed, the fluid is partly absorbed, partly evaporated, the cuticle then peels off, leaving a non-discharging, reddened, exposed derma. In some of the milder cases only vesicles are formed. When disappearing altogether from the hand, the palm is left harsh and slightly scaling. In some cases a red, slightly scurfy, painful surface is left behind and becomes chronic. No patient is well who has this disease. In severe cases there is great nervous debility."

The feet may be affected alone, especially between the toes and on their dorsal surfaces, but more generally it is the hands alone that are involved. The disorder usually lasts from one to two weeks, but recurrences are the rule, sometimes appearing with varying intensity several times a year.

Hutchinson's account of the disease is similar in most points. He calls attention to its presence on the feet, its tendency to recurrence, together with the "extreme depression of spirits" that accompanies it in some cases. Crocker says that the disease is seen oftenest in summer, and in damp handed persons who are nearly always out of health at the time of attack. The disorder in its aggravated form is uncommon, but the mild grade, consisting of deep-seated vesicles in the palms, along the sides of the fingers and on the soles is not rare in my experience.

Pompholyx is said to be more common in women than



in men. In Hutchinson's experience it occurred always in middle life. Crocker saw a case in a girl of twelve. There is a tolerably general agreement in the fact that the affection is an expression of nervous debility.

As is well known, Fox considered the eruption as due to a disease of the sweat glands, a contention that was disputed by Hutchinson and Robinson, the latter holding that the disease is a neurosis, and that the vesicles have an origin similar to those of herpes, and especially herpes pro-genitalis. Crocker came to the conclusion that the disease is intimately associated with the sweat apparatus, but connected rather with hyperidrosis than dysidrosis; that, further, the disease is of neurotic origin, perhaps a vasomotor neurosis leading to inflammation in and about the sweat apparatus, but not limited to these structures.

The most recent investigations of Santi and Williams are said to have demonstrated the independence of the sweat pores. Unna thinks that he has found the cause of the disease in a particular bacillus about the length of the tubercle bacilli, but broader, that lie in twos and threes behind each other and form zigzag threads 6 to 8 m. long. He thinks further that increased sweating induces their proliferation, this being most active in the neighborhood of the sweat pores. This pathogenesis, Unna concludes, explains the apparently opposing views of authors, inasmuch as we can concede the exudative nature of the vesicle, due to the micro-organism, while its relation to hyperidrosis and to the region of the sweat pores is made clear.

**DIAGNOSIS.** The essential characteristics of pompholyx are the deep-seated vesicles limited to the hands and feet, which show no tendency to rupture, and the recurrent nature of the attacks. It should be differentiated from scabies, eczema, and, in its aggravated forms, from pemphigus.

**TREATMENT.** Internal treatment in the shape of tonics, especially iron and arsenic, and, according to Whitehouse, particularly the latter in large doses, attention to diet, and enforcement of proper hygiene will afford the best results.



Locally, soothing and somewhat astringent remedies may be prescribed with advantage. While the vesicles are intact, the oxide of zinc and calamine lotion is to be recommended.

R.	Zinci oxidi,	℥ss.	
	Pulv. calaminæ præp.,	℥iv.	
	Glycerini,	℥j.	
	Liq. calcis,	℥vij.	M.
S.	Shake—Local use.		

Afterwards, when the skin is reddened, scaling and tender, it is advisable to apply the unguentum vaselini plumbeum spread on lint and neatly bound on the parts.

PROGNOSIS. The immediate attacks are always susceptible of amelioration; but the tendency to relapse is difficult to overcome.

### HERPES.

The term herpes is derived from the Greek, and signifies to creep; and in past times and even to-day, it is used for a large number of dissimilar affections. Certain French writers go so far as to speak of an herpetic diathesis, whatever that may mean.

Among modern dermatologists, however, herpes denotes an eruption consisting of groups of vesicles on an inflamed base, and connected, as Jamieson expresses it, more or less distinctly with neurotic disturbances. I shall, therefore, follow the classification usually adopted and employ the term for two affections only, viz., herpes simplex and herpes zoster.

### HERPES SIMPLEX.

Under this head it is customary to include herpes facialis and herpes progenitalis. For convenience of clinical description it is better to make a further subdivision as follows:

#### Herpes Facialis.

This is an acute non-contagious inflammatory affection, which appears in the form of one or more groups of vesi-



cles. The eruption is usually spoken of as fever blisters. The favorite sites for the vesicles are the lips, at the angles of the mouth and on the face generally below the forehead. The eruption also attacks the mucous membranes of the mouth, cheeks, tonsils, uvula, pharynx, larynx, conjunctiva and cornea. The eruption comes out suddenly, being preceded by a sensation of tingling, burning or itching. The contents of the lesions are clear at first, but in a day or two become puriform, but when the light brownish crusts fall off the skin usually shows no loss of substance. The whole cycle occupies about eight or ten days.

It is proper to divide herpes facialis into the idiopathic and symptomatic varieties. While in the majority of cases the eruption is symptomatic of febrile disorders, respiratory, malarial, etc., and is often preceded by shivering and rise of temperature, and in other instances is due to gastric disturbances, reflex irritation from troubles about the anus, etc., many cases are the result of simple irritation, in which circumstance the vesicles, one or more, are most prone to attack the lips, and especially the lower lip. Sometimes the eruption is markedly recurrent. According to Van Harlingen some women have an attack of herpes before, during or after each menstrual epoch. The idea of herpes having any critical or prognostic significance in fevers is now generally abandoned, but Powell<sup>1</sup> has recently affirmed that if during an attack of intermittent or remittent fever a patch of herpes breaks out on the lips, face or elsewhere, it may be regarded as a sign that the malarial attack is over.

### **Herpes Progenitalis.**

Herpes occurring about the genitals is sufficiently characteristic to demand a special description. While very annoying in itself it derives additional importance from the possibility of confusing it with more serious affections of these parts. Usually before the eruption makes its ap-

<sup>1</sup> Brit. Jour. Derm., Sept., 1897.



pearance the patient is apt to feel some slight burning or tingling, which presently is followed by an eruption of vesicles, varying in size from a pin's head to a small pea, and in number from two to three to a dozen, but more commonly five or six. Greenough<sup>1</sup> states that the order of frequency as to situation is as follows: the sulcus, the inner surface of the foreskin, the glans, the margin or edge of the prepuce and lastly the shaft of the penis. The vesicles, when situated on the delicate mucous membrane, speedily rupture, and show merely little eroded spots, circularly disposed, and seated on a reddened base. Sometimes the little erosions run together. On the skin the vesicles, as in *h. facialis*, do not readily rupture, but become opaque, and dry into a brownish crust, which upon becoming detached leaves a slightly reddened surface. The disease also occurs in women, affecting the mucous surfaces of the pudendum, as well as the outer portion of the labia and the mons veneris.

Personally, it so happens, that I have never seen a case in which there was not a previous history of venereal disease; but undoubtedly the disorder does occur in persons without such antecedents, although it is possible that maladies of the kind exercise a predisposing influence. As Taylor states, "any or all congestions, or inflammations, ephemeral or long continued, of various grades, affecting one, several or all portions of the genito-urinary tract of both sexes" act as local determining causes.<sup>2</sup>

The local habit of eruption having been established, frequent recurrences are the rule.

DIAGNOSIS. The diagnosis of herpes facialis is generally easy. From eczema it is to be distinguished by the usually larger size of the vesicles, their grouping, the fact that they do not readily rupture, which latter is the characteristic feature of the eczematous vesicular lesion, the regular course of the affection, and the absence of marked pruritus. Herpes zoster never occurs in the situations affected by

<sup>1</sup>Arch. Dermatol., Jan., 1881.

<sup>2</sup>Clinical Atlas of Venereal and Skin Dis., 1888.



herpes facialis, and in herpes zoster there is decided pain of a neuralgic character, and the course that herpes zoster runs is much longer.

Herpes progenitalis should be differentiated from the chancreoid and the chancre of syphilis. In many instances it is possible to obtain the history of repeated similar attacks, and then the sensations of tingling and burning experienced by the patient, the superficial character of the herpetic lesions, the scanty secretion, and the absence of deep ulceration will generally suffice to emphasize the distinction from the chancreoid. From the initial lesion of syphilis, especially in the absence of a satisfactory history, the differences are not always so well marked. However, the lesion of syphilis is not of the inflammatory type, and the color is coppery and not red as in herpes. Leloir says that if a herpetic ulceration is pressed between the thumb and forefinger a few drops of serum may be made to exude, while a chancre similarly treated will remain dry. When herpetic vesicles have been foolishly cauterized, the diagnosis must be held in abeyance.

Finally, it should be remembered that the herpetic erosions may be the door of entrance for the syphilitic virus, and it sometimes happens that an ordinary herpetic eruption may take on later the appearance of the initial sclerosis without having any other connection with syphilis than a purely accidental one.

**TREATMENT.** The treatment of herpes facialis should have regard to the protection of the part from all sources of irritation. The lotion of calamine and zinc is an excellent application. It is sometimes possible to abort a coming vesicle on the lip by repeatedly rubbing over it a piece of borax. Often in children it is advisable to paint over the eruption a little flexible collodion, as otherwise the inflammation is kept up, and a considerable sore produced by the constant irritation of saliva, nasal mucus, etc., especially when the lesions are about the angles of the mouth or on the upper lip.

The vesicles or erosions of herpes progenitalis should



never be cauterized, since such treatment is harmful, often producing deep ulcers that may persist for weeks, and it also leads to great confusion in diagnosis. Dusting the surfaces with a little carbonate of magnesia and keeping them apart by dry lint is often all that is necessary. Occasionally, if the surface has become somewhat angry, a bismuth ointment (5j-3j) is efficacious. If suppuration should occur from undue irritation, iodol or iodoform is demanded. Should there be coincident tenderness of the inguinal glands, rest in bed, and the application of an ointment of iodoform (5ij-3j) over the sensitive glands, will prove useful. In addition to the local measures demanded in herpes progenitalis the prophylactic treatment requires general and local hygiene. A redundant prepuce may be cut off with some hope of success, but I have seen this procedure fail of any permanent result in many cases.

### HERPES ZOSTER.

Herpes zoster, zona, or, popularly, shingles, is an inflammatory disease of the skin, which consists of grouped vesicles on a reddened base, the lesions being distributed in relation to the course of the cutaneous nerves. The most frequent seat of the disease is around the trunk following the distribution of the intercostal nerves; hence the term zoster, a belt, and the word shingles from a corruption of cingulum, a girdle. It is necessary to remember, however, that zoster may occur in the course of any cutaneous nerve, and presents, more or less exactly, the same symptoms as when it attacks the more classical locality.

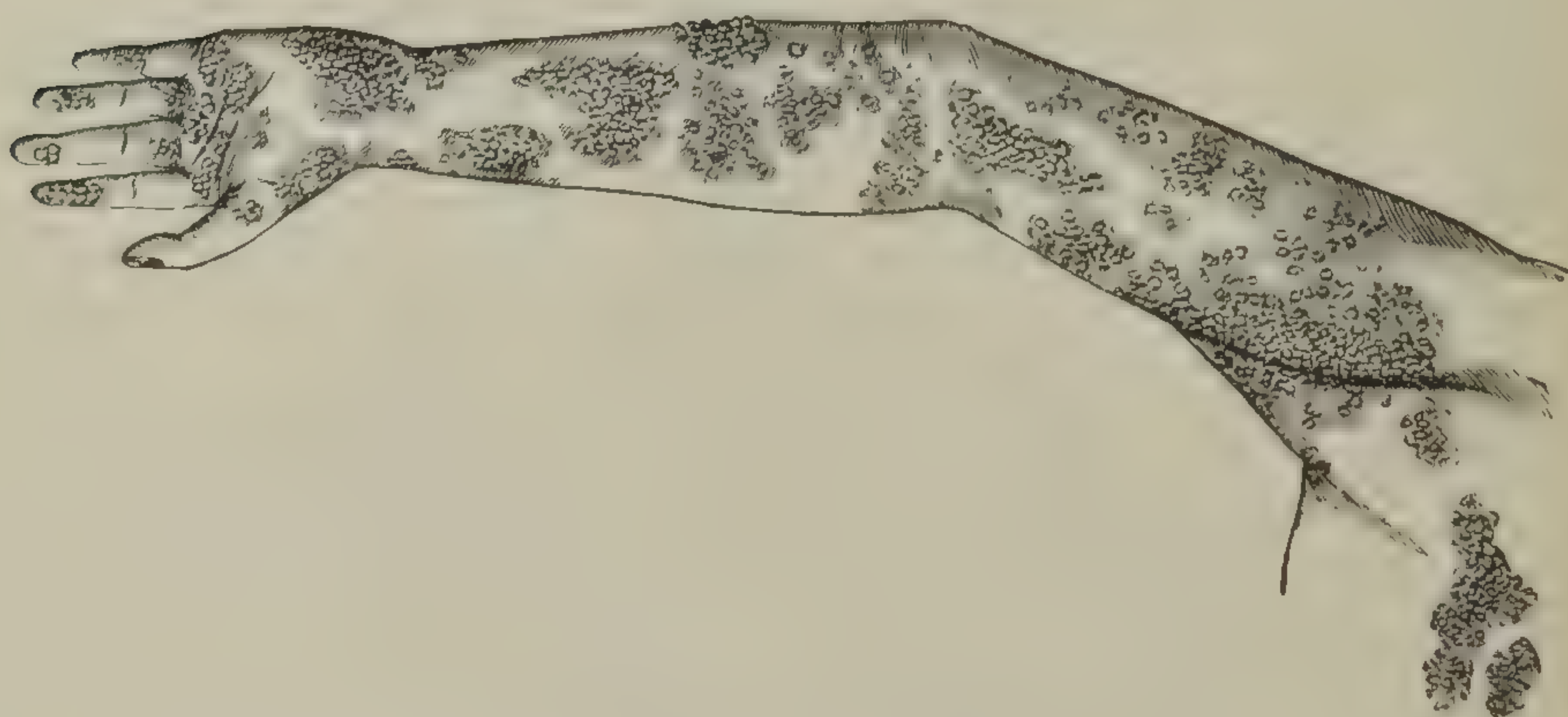
Before the outbreak of the eruption the patient will usually experience considerable neuralgic pain. The eruption occurs in the shape of little erythematous patches, upon which for a very short while in the beginning minute, grouped papules are to be detected, that, however, speedily develop into distinct vesicles. The fully established disorder is very characteristic.

Taking a general view of the eruption, it is seen to be



made up of clusters of large opaque vesicles that have an arrangement not unlike bunches of grapes, only that the branches and twigs are hidden from sight. This is due to the fact that the lesions follow the course of a nerve or its offshoots. The vesicles vary in size from a pin-head to a pea, those that come out last generally being the smaller. Often they appear in large numbers, in which case one or more vesicles may coalesce to form a large bleb. Their contents are at first clear, but eventually grow turbid and puriform. The vesicles do not rupture spontaneously, are more or less umbilicated, and in the course of ten days to

FIG. 1.



Herpes zoster of the Arm.

two or three weeks dry up into brownish crusts, which upon becoming detached show a reddened surface, or here and there slight pits. The eruption is in the vast majority of cases unilateral, which fact has given rise to the popular idea that if the lesions make the circuit of the body, for example, a fatal issue may be expected. The neuralgic pain may subside on the outbreak of the vesicles, but this is not usually the case, often persisting, with local burning sensations throughout the course; and indeed the neuralgia may last, especially in old or feeble persons, for months or years afterwards. The disease rarely occurs twice in the same individual, but there are exceptions to this rule.



There are certain variations in the course of the disease, as outlined above. The eruption may run an abortive course, no vesicles being produced at all. Sometimes the vesicles may become hemorrhagic. In old or badly nourished subjects, or from traumatism, ulceration of the skin and consequent deep scarring may result. Certain trophic disturbances may ensue, and even motor paralyses.

Herpes zoster ophthalmicus may be a very serious affection. Vesicles form on the cornea, which soon rupture, the exposed tissue takes on purulent infiltration, and pus is often deposited in the anterior chamber. Iritis is generally present. Permanent corneal opacities are apt to result.

It is therefore to be seen that herpes zoster may occur anywhere in the course of cutaneous nerves. Various names have been applied to indicate the anatomical seat of the eruption, namely, *z. capillitii*, *z. frontalis*, *z. ophthalmicus*, *z. facialis*, *z. nuchæ*, etc. In practice it is not unusual to meet with chronic or relapsing zosteriform eruptions, which it is difficult properly to classify. Grindon<sup>1</sup> in a valuable paper has collected from literature a large number of such cases, which he would designate as zosteroids. He sums up his conclusions as to the etiology of these eruptions as follows: 1. Chronic peripheral irritation. 2. Traumatism; *a*, central; *b*, in continuity; *c*, peripheral; *d*, reflex. 3. Pressure on a nerve trunk (osteophytes, infiltration of surrounding tissues, pleuritic adhesions). 4. Infiltration of a nerve or ganglion by some neoplasm or a simple and (in this regard) non-specific inflammation. 5. The presence in the blood of some irritating substance, such as lactic or uric acid.

A great many observations have been made in relation to the pathology of zoster. Bärensprung was one of the first to point out that the disease was essentially a neurosis. The limits of this work, however, will prevent an exposition of the subject here. Gilchrist does not believe that the so-called protozoa of herpes zoster are anything but

<sup>1</sup>Jour. Cutan. and Genito-urin. Dis., June, 1895.



the nuclei of epithelial cells. In his investigations he found other kinds of bodies similar to "cancer parasites" so-called, but which he thinks are large eleidin granules corresponding to the eleidin granule of the stratum granulosum.

Crocker states, after a very careful examination of the literature of the subject, that zoster is produced by any irritative lesion or condition, in any part of the tract from the cord to the periphery of the nerve supplying the affected skin, but that most frequently there is a descending interstitial neuritis of the spinal ganglion. Kaposi contends that zoster may be of cerebral, spinal, ganglionic or peripheral origin.

**ETIOLOGY.** Rohé,<sup>1</sup> of Baltimore, was the first to insist that zoster should be classed with the acute infectious diseases, this view being based upon the self-limited character of the disease, the existence of prodromic symptoms, the fact that recurrences are rare,<sup>2</sup> the regular course run by the affection, and the, at times, quasi-epidemic prevalence of the disease. Erb and others take the same view. However much of truth there may be in these observations, it is well known that many other causes are capable of producing zoster, such as traumatism, toxic influences of various sorts, peripheral irritants, etc. Mr. Hutchinson has shown that the disorder is apt to occur in those taking arsenic. The affection is more common in young people, and is probably more frequently seen in the autumn and spring of the year, that is, in the seasons when sudden changes of weather are most apt to take place, and with the least preparation for them in the way of clothing, etc. In four cases of zoster Winfield<sup>3</sup> has demonstrated the malarial parasite.

**DIAGNOSIS.** The features of herpes zoster are so characteristic that it is difficult to confound the disease with any

<sup>1</sup> Archiv. Dermatol., July, 1877.

<sup>2</sup> Kaposi reports a case in which there were nine recurrences, and I have seen three returns in the same person.

<sup>3</sup> N. Y. Med. Journ., April 6, 1895.



other. As the eruption so commonly occurs around the trunk, its appearance elsewhere is unlooked for, and under these circumstances mistakes in diagnosis often occur. It should be remembered, however, that wherever the vesicles make their appearance the subjective and objective symptoms—neuralgia, the obvious distribution of clustered vesicles in the course of the cutaneous nerves—are the same. From vesicular eczema herpes zoster is to be differentiated by the fact that in eczema the eruption is not specially localized, the vesicles are small, acuminate, and readily rupture, leaving a raw, exuding surface, accompanied by intense itching; in zoster the eruption follows the distribution of cutaneous nerves, the vesicles are large, are distinctly clustered, do not rupture spontaneously, there is no discharge feature, and the subjective symptoms are those of pain and burning, and not of itching.

Herpes simplex, while having some features in common with zoster, differs from it completely in course, location and subjective symptoms (see that disease).

TREATMENT. It should be borne in mind that zoster, as ordinarily encountered, is an acute, self-limited disease, which, moreover, presents great variations in both local and constitutional symptoms. In children it is mild in character, while in the adult, and particularly in old people, it is apt to be severe, and leave behind persistent neuralgia. Therefore, with these facts before us, it is easy to put the proper valuation on the various so-called specific methods of treatment. I do not believe that there is any remedy capable of aborting zoster; but as the disease is often self-abortive, and always self-limited, it is clear that drugs often secure undue credit. It is fair to state that Thompson, Bulkley and others claim good results in lessening the severity of the attack by administering the phosphide of zinc in one-third grain doses every three hours. Van Harlingen states that it is very efficient for the accompanying neuralgia. For the same purpose Duhring advises ten or twelve cells of the galvanic battery. I can confirm his observations, as most decided mitigation



of the pain may be obtained in this way. I pay no attention to the direction of the current. The applications should be made once or twice a day, the last one at night, and should last ten or more minutes at each sitting. In adults it is sometimes necessary to use morphia hypodermically, although phenacetine, or phenacetine and salol, usually gives satisfactory results. Jamieson is authority for the statement that, if the character of the premonitory pains be recognized in time, a blister over the spine on the painful side will partially or completely abort the cutaneous manifestations. Drinkwater<sup>1</sup> recommends spirit of camphor in five-minim doses, on sugar, three times a day.

There are many local applications for the relief of zoster. The best in most cases is the flexible collodion, as it eases the pain and protects the vesicles from rupture, an accident that is always to be deplored. In adults, the following combination is useful:

R.	Morphiæ sulphatis,	gr. v-x.
	Collodii flex.,	℥j. M.
S.	Paint over eruption.	

Leloir advised alcohol pure or an alcoholic solution of resorcin, thymol and several other drugs in the abortive stage, but it is also claimed that this method is effectual in any stage of the disease and also in herpes simplex. Some of the formulæ used by Leloir are appended:

R.	Alcoholis (90 per cent.),	℥j.
	Resorcini,	gr. x. M.
R.	Alcoholis (90 per cent.),	℥j.
	Menthol.,	gr. xv.
	Ext. cannabis indicæ,	gr. xxv. M.
R.	Alcoholis (90 per cent.),	℥j.
	Ext. cannabis indicæ,	gr. xxv.
	Cocain. hydrochlor,	gr. vj.
	Spiritus menthæ piperitæ,	℥j. M.

<sup>1</sup> Brit. Med. Jour., April 13, 1895.



These various solutions are applied by means of pads of wadding, and are frequently renewed.

Dusting powders containing morphia or camphor are also advised. Smearing the surface gently with vaseline, and then dredging on subnitrate of bismuth, makes an agreeable application. Ointments should be avoided. When, however, the vesicles have been accidentally broken and ulcerations occur, the unguentum vaselini plumbicum, with or without iodoform, may be spread on muslin and bound on the parts.

Meredith says that the oil of peppermint, both in the acute stage and for the after pains, is an admirable remedy. Menthol in ointment or lotion is better still. In my experience the best remedy for the persistent neuralgia that so often follows zoster in adults is the galvanic current applied in the course of the affected nerve. At the same time, tonic treatment, according to the indications present, should not be neglected.

PROGNOSIS. The prognosis of zoster is usually good, one may say invariably so in young, healthy persons, but in the broken-down or the aged, or if the disease affect the eye, a more guarded opinion should be given. As deep scars are sometimes left, the physician should warn the patient of this possibility, lest they should be attributed to the remedies employed.

### PEMPHIGUS.

Pemphigus is an acute or chronic inflammatory disease of the skin, characterized by the formation of variously sized bullæ that appear in successive crops. It is a comparatively rare affection. In the statistics of the American Dermatological Association it was represented 291 times in a total of 204,866 cases of skin diseases of all kinds.

It is difficult to define pemphigus with exactness, since many bullous disorders have been classed under that head. Duhring takes pemphigus vulgaris as a type, and wisely observes that a bleb does not constitute a pemphigus. Unna excludes from consideration pemphigus vegetans,



p. conjunctivæ, p. pruriginosus, p. syphiliticus, p. leprosus, p. neuriticus and hystericus, and impetigo contagiosa. It is customary to speak of pemphigus as presenting two principal varieties, viz.: p. vulgaris and p. foliaceus.

### **Pemphigus Vulgaris.**

The variety of p. vulgaris most commonly encountered is the chronic form; indeed the idea of an acute development of the disease was for a long time denied.

Constitutional symptoms are not observed in all cases of chronic pemphigus. As a matter of fact, it would appear that the degree of systemic reaction is in direct proportion to the extent of the local dermatitis. In extensive eruptions of blebs in old persons or young children there is usually an antecedent chill, followed by some rise of temperature, which symptoms are repeated at each separate outbreak.

Usually, aside from the local discomfort, there is little complaint of constitutional disturbances. The local symptoms are significant. The individual lesions consist of hemispherical or oval blisters of various sizes. At first they come out as little transparent vesicles, which, however, quickly grow to the bigness of a pea, or go on increasing to the size of a walnut or orange, or one or more bullæ may coalesce, forming a large irregular bleb. As a rule, however, the lesions vary in size from a hazelnut to a walnut. The bullæ may come out on unaffected skin, or there may be a preceding local erythema at the point of eruption. The lesions arise abruptly, forming tense bladders filled with fluid, which, at first clear, gradually become turbid, and in some cases decidedly purulent.

Each bleb runs its course in from two to eight days. Spontaneous rupture is uncommon, but the contents are soon absorbed, leaving a slight crust or scab formed by the roof of the blister.

The site of the bleb is marked for a time by a superficial excoriation, followed by slight injection of the skin, and some degree of pigmentation.



Pemphigus may occupy any region of the body, probably being most frequent on the limbs, trunk and face. At the same time that blebs form on the skin they may be encountered on the mucous membranes of the mouth, conjunctivæ,<sup>1</sup> and also in the respiratory and alimentary tracts. The characteristic feature of pemphigus is the manner in which the disease is kept up by successive outbreaks.

In what is called benign pemphigus the eruption may continue for a period of several months, being kept up by repeated attacks, or relapses may take place at longer intervals. In the malignant form the disorder may run a more violent and rapid course, terminating fatally in a few weeks.

The local symptoms consist mostly of a feeling of burning and tension; but when the eruption is extensive the suffering is apt to be very severe, exactly similar in fact to what occurs in a burn or scald of the skin.

In former years our nomenclature was burdened with a vast number of special varieties of pemphigus. According to Crocker, Martins made as many as 97 varieties and sub-varieties. Most of these names, however, are of no practical importance, and only add confusion to the description of a disease which, from its irregularities and eccentricities, is difficult to describe accurately under any circumstances.

As stated above, certain writers deny the existence of an *acute pemphigus* (Hebra, Anderson), but the majority of modern authorities admit this form of the disease. It is undoubtedly true that other acute eruptions, that bear a more or less close resemblance to pemphigus, have been confounded with it, and, moreover, I think it is going rather too fast and too far when an endeavor is made to establish a bullous exanthem exhibiting the various stages of the ordinary eruptive fevers. However this may be, acute outbreaks of pemphigus have been recorded<sup>2</sup> in adults and in children, which run a tolerably rapid course and

<sup>1</sup>See exhaustive paper by Morris and Roberts in British Jour. Dermatology, April, 1889.

<sup>2</sup>See excellent paper by Allen, Jour. Cutan. Dis., April, 1888.



possess the local features of pemphigus. This form of pemphigus is much more common in children. Fever may or may not be present, and the children attacked may be otherwise healthy. At times it runs into the chronic type. The prognosis is difficult to forecast, but a fatal termination when it does occur results as a rule from gastro-intestinal complications. Any part of the body may be involved, although it is said that in infants the face is rarely invaded, and the palms and soles not at all (Weyl).

Under the name of *pemphigus acutus neonatorum* a form of the disease occurring in newborn children has been described. These cases appear sporadically or in epidemics. Kilham, Ravogli and Corlett have reported such outbreaks in this country. In some instances fever has accompanied the outbreaks, in others the cases have been afebrile. For the most part this epidemic pemphigus has occurred in lying-in institutions or in the practice of midwives.

It is difficult to accept this designation as conveying any fixed conception of a special type of disease, since some of the cases recorded differ in no way from acute pemphigus, while others would seem to represent many different and sometimes unknown disorders.

### Pemphigus Vegetans.

This affection was first described by Neumann in 1886 as being related to true pemphigus.<sup>1</sup> Hyde in this country has reported a case. It usually attacks a mucous membrane in the beginning, the initial lesions being situated in the mouth or pharynx, or in the anus or external female genitals, and in the first-named localities often accompanied by much pain in deglutition. After two or three days, and without any preceding or attendant general symptoms, ordinary pemphigus bullæ begin to come out on the skin. The blebs, instead of drying up in the usual way, become excoriated and give off a viscid, ill-smelling secretion, and, other blebs appear-

<sup>1</sup> Unna denies this relationship and regards p. vegetans as a local infection. He proposes the name "erythema bullosum vegetans."



ing in their neighborhood, by coalescence form large raw patches of various sizes and shapes. The lesions, as a rule, show no tendency to healing, but in certain situations, especially where surfaces are in contact, become covered with papillary excrescences resembling condylomata. Superficial necrosis may occur. The disease pursues a chronic course, fresh crops of bullæ appear, and the patient finally succumbs to marasmus or dies from some intercurrent disorder. Some few cases of recovery have been reported.

### **Pemphigus Foliaceus.**

This remarkable eruption was first described by Cazenave. It is much more infrequent than pemphigus vulgaris, and by some writers it is regarded as independent of that affection. Except for the fact, vouched for by good observers, that the disease sometimes begins as a p. vulgaris, it is quite clear that in many of its clinical features the resemblance between the two disorders is not very close. The blebs are flaccid, and not elevated and tense as in ordinary pemphigus. Their contents are more or less cloudy from the beginning and in some cases turn purulent. The blebs are not long-lived and soon rupture. When their covering is pushed or slid off with the finger the surface beneath is seen to be moist from the presence of a nauseous sticky secretion, which dries into flaky crusts. The disease spreads slowly, but surely and eventually the whole body will become involved. The mucous membranes of the mouth and throat may be affected, the nails ridged or even cast off, alopecia and ectropion develop and the patient finally sinks from marasmus. In a case under my care some years ago, occurring in a gentleman of 66 years, the disorder began on the chest, and looked in the beginning like an eczema rubrum. From my notes taken at the time I shall briefly summarize a few of the more interesting points in his history. "The whole of the face was red and eczematous-looking when the patient first came under observation, and up and down the trunk were numerous exuding red places with adherent epidermic flakes, and about the lum-



bar spine some irregular flaccid bullæ. Finally, after repeated outbreaks of blebs, which were always preceded by a chill, the whole body, with the exception of the palms and soles, was affected, giving the patient the appearance of one who had been dipped into a vat of boiling water. The mucous membranes of the mouth and throat were affected, the nails were cast off, ectropion was established and the hair remained only in tufts and patches. What may be called the "wet stage" of the disease lasted altogether about one year, at first making but slight headway and apparently interfering but little with the general health, but towards the end of this time the chills became more frequent, the successive formation of blebs more rapid, and within six weeks the various points of attack coalesced from extension of the process and not a portion of the entire surface escaped. In the course of time the skin assumed a violaceous hue, free scaling constantly occurred, and when the patient was last seen he presented all the typical features of pityriasis rubra. A few of the special symptoms of the "wet stage" may be noted. The patient would feel very itchy at a certain point, and upon rubbing the part to allay the pruritus the skin would slip from under his finger and display a moist red and exuding spot. In many instances the development of blebs would be announced in this way. Some of the bullæ were tense and full like those of *p. vulgaris*, but these never appeared in the neighborhood of the typical lesions, but always at a distance. In some instances contiguous blebs would run into each other; in others new, small blebs would arise in the periphery of older ruptured lesions, and thus undermine the space between the affected patches. Some of the bullæ were purulent, but in most the contents were clear. When a blister first broke the exposed part would exude a clear serum, and the floor of the lesion would be bright and glistening, but after a short while the secretion would become viscid and eventually dry into doughy crusts. In this way the different surfaces of the body would present very dissimilar aspects, varying in appearance according



to the progress of the disease in one place or another. After the exfoliative dermatitis was established no new bullæ developed, at least for the year that he remained under my care. I subsequently lost sight of the case, but I understood five years afterwards that he was still living, but was now excessively feeble and emaciated and still in the condition of *pityriasis rubra*."

Pemphigus may occur at any age, although more common perhaps at the extremes of life. It is also likely that females are more liable to the disease than males. The affection may make its first appearance in perfectly healthy persons. It is generally stated in the text-books that the causes of pemphigus are unknown, and, until it is possible to define more accurately what we understand by the term, this dictum had better be allowed to stand. Clinically, the phenomena of successive crops of blebs are seen to be associated with a variety of conditions. As already pointed out, pemphigus sometimes apparently occurs epidemically among infants, and it is assumed that this form of the disease is contagious. Winckel relates a case that developed before birth, and it often is almost congenital, and an hereditary predisposition to pemphigus has been observed, but these latter cases are now looked upon as examples of *epidermolysis bullosa* (q. v.). Various disorders of the nervous system, such as hysteria, epilepsy, nervous prostration, etc., have been noted in connection with, or as antecedents of, pemphigus, as has also pregnancy. Some cases are of presumed septic origin. Bullous eruptions have been produced by verbal suggestion. Anatomical changes have been demonstrated in the spinal cord and in the peripheral nerves. Cases of pemphigus following local injury have been frequently recorded. Micrococci have been found in the contents of blebs by various observers. Demme has demonstrated diplococci in acute cases, and Daehnhardt has found the same organisms in blebs and in the blood from the finger. Whipham<sup>1</sup> found diplococci similar to those observed by Demme and others, and the same micro-

<sup>1</sup> *Lancet*, May 2, 1896.



organism was found in the lungs post-mortem. Pernet and Bulloch,<sup>1</sup> as the result of clinical and bacteriological observation, believe that there is a group of rare cases of acute bullous eruption, accompanied by severe constitutional symptoms, and usually ending fatally, which affects butchers; and also a group of similar cases, in which the patients are brought into contact with animals or dead portions of animals. The disease follows a wound of the hands or fingers, and is probably due to a micro-organism, which is identical with the micro-organism described by Demme and Claessen.

**DIAGNOSIS.** As generally accepted, the word pemphigus conveys the idea of a diseased condition in which there arise *successive* crops of bullæ, and, as a rule, running a chronic course. It is well known that blebs may develop in the course of other affections, *e. g.*, scabies, eczema, erysipelas, urticaria, erythema multiforme, etc., but in these instances they are inflammatory in character, and are accidents rather than characteristics of these affections. So also blebs are encountered in leprosy and syphilis; but in these and similar disorders the history and concomitant symptoms must be taken into account, and a due consideration of these facts will usually suffice for the differentiation. In blisters resulting from friction, etc., the exciting cause is generally apparent. Malingerers and hysterics sometimes wilfully blister the skin with nitric acid, and thereby produce blebs that may prove confusing to the inexperienced physician, but here the history and general aspect of the patient, the bizarre and irregular character of the eruption, and its location in some easily accessible part of the body should arouse suspicion and put the medical man on his guard. Pemphigus foliaceus in its exuding stage looks not unlike an eczema rubrum; but the general physiognomy of the former disease, the emaciation, chills and diarrhœa, and the character of the discharge, which is thinner, the flaky crusts, and the detection at some point of the peculiar flaccid blebs, present quite a

<sup>1</sup> Brit. Jour. Derm., May, June, 1896.



distinctive picture. I think no one, without the history of the case, would be able to distinguish between pemphigus foliaceus in the scaling stage and pityriasis rubra—they are exactly alike; and, indeed, except in the interest of accuracy, the diagnosis is of no importance whatever as regards the treatment of the disease. There is usually little difficulty in differentiating pemphigus from dermatitis herpetiformis. Pemphigus is an essentially bullous disease while dermatitis herpetiformis is characterized by multiformity of lesion, and even if for a time the latter affection should present bullous lesions alone, it will at some future period appear in its true features.

Erythema iris and impetigo contagiosa should also be borne in mind in arriving at a proper diagnosis, as also certain rare manifestations of scabies, the bullous syphilide and urticaria bullosa.

TREATMENT. In acute pemphigus the aim should be to discover the exciting cause if possible, or else to direct the treatment to the cure or alleviation of complications. Otherwise the case must be prescribed for to meet the indications presented by the disease itself, viz., rest in bed, nourishing food, stimulants, quinine for the fever, tonics, etc. In chronic pemphigus it is of importance to keep up the strength of the patient and to allay local discomfort. Arsenic in full doses, preferably in solution, has been regarded as a specific by some (Hutchinson, Bulkley). It is a remedy of great value, but I have not found it by any means infallible. It often, however, seems to be capable of controlling the disease. In a young girl under my care five minims of the Fowler's solution three times a day would prevent the appearance of blebs, but as soon as they were discontinued the disorder would return as severely as before. The deodorized tincture of opium is also of much service, administered either alone or combined with the arsenic. Among other remedies that have been employed with more or less success may be mentioned pilocarpine, atropine, strychnia, quinine and antipyrine. Sherwell advises linseed meal in ounce doses with milk, and reports favorable results.



The local treatment consists in puncturing the blebs to relieve the painful local tension, but it is best not to disturb the crusts, since they afford protection to the exposed corium beneath them. In extensive cases the treatment by the linimentum calcis, as in a common burn, affords the most relief. I usually add to each ounce of the liniment one minim of the best creasote. The continuous warm bath of Hebra may be tried in hospital practice, but is hardly practicable among private patients. The lesions occurring in the mouth and throat should receive the requisite attention. The same local measures recommended for pemphigus vulgaris may be also employed for the foliaceus form of the disease. I know of no drug capable of forestalling the inevitable ending of this latter grave affection.

**PROGNOSIS.** The prognosis in pemphigus is uncertain, a fact which would be expected from a consideration of its varied etiology. Acute pemphigus and the pemphigus of children generally admit of a favorable prognosis. Under some circumstances, in the chronic form, the disease may subside in a few months, or again the successive formation of bullæ may continue for life. On the other hand, relapses are not uncommon. In other cases death results more or less speedily, especially in elderly or debilitated persons, from the exhaustion incident to the process, or else from some intercurrent disease. The prognosis in pemphigus foliaceus is invariably hopeless.

### IMPETIGO HERPETIFORMIS.

Our knowledge of this rare affection is derived from Hebra and Kaposi. It may be defined as an inflammatory affection of the skin, characterized by grouped and aggregated miliary pustules, and accompanied by grave constitutional symptoms.

The symptoms are as follows: Each outbreak on the skin is preceded by rigors, fever of a remittent type and disturbances of the general health. The eruption develops first on the inner sides of the thighs, groins, around the



navel, breasts, axillæ and later on other parts of the body.

It consists of superficial, miliary pustules, sometimes discrete, but generally closely set, and forming circular groups. The contents of the pustules are at first opaque, but later become of a greenish yellow, and dry up into dirty brown crusts. While the central pustules of a group dry up after a time, new pearl-like lesions appear in one or more circles around the periphery of a patch, and by coalescence extensive areas become involved. When the crusts are detached the skin is seen to be red and covered with a new epidermis, or else moist as in eczema, with a smooth infiltrated surface, or presenting papillary elevations. Ulceration rarely occurs. After three or four months the disease affects almost the whole surface, which exhibits swollen, crusted and excoriated patches here and there still surrounded by pustules. The mucous membrane of the tongue, oral cavity and œsophagus may be involved, showing circumscribed, gray plaques, depressed in the center, and also small pustules and points of ulceration.

Perhaps a score of cases have been reported altogether, but it is doubtful whether they were all examples of this disease. The great majority of these cases were in pregnant women and most of them ended fatally. There would seem to be, however, certain exceptions, for instances of the malady have been reported in non-pregnant women, and Kaposi himself records a case occurring in a young man; moreover, one or two recoveries have been noted. Dauber<sup>1</sup> publishes the history of a case in a woman who had four recurrences of the disease, dying from the last. There have also been reported a number of anomalous eruptive disorders bearing a more or less close likeness to impetigo herpetiformis (Zeissler, Heitzman, Pataky, et al.).

Various opinions have prevailed as to the nature of this rare affection. By some it has been looked upon as a neuro-pathic reflex dermatosis, and by others as a pyæmic process. Septic processes in the body have been frequently

<sup>1</sup>Archiv. f. Derm. u. Syph., Bd. xxviii., Heft. 2 u. 3.



observed at autopsies, and the changes in the kidney, spleen, liver and stomach could only be induced, according to Dauber, by some chemico-toxic poison of a specific character. The general and local treatment should be determined by the special conditions present.

### DERMATITIS HERPETIFORMIS.

Under the various titles of hydroa, pemphigus pruriginosus, herpes circinatus bullosus, herpes gestationis, etc., medical writers have long recognized a grave and intractable affection having certain features in common, but presenting, when studied singly, many apparently divergent and dissimilar symptoms. It was left to Duhring, of Philadelphia, to show that these manifold manifestations of cutaneous disorder have symptoms sufficiently characteristic and related to each other to warrant the belief that they are but different expressions of a definite disease. The great majority of dermatologists are now united in accepting this brilliant generalization. According to Duhring<sup>1</sup> dermatitis herpetiformis is an inflammatory disease of an herpetic character, the various lesions showing a tendency to group. It is a protean malady and manifests itself in various elementary forms, such as erythema, vesicles, blebs and pustules, that are at one time distinct, or else they may coexist, or even may merge the one into the other, thus constituting a mixed eruption. Multiformity of lesion is therefore a prominent characteristic. The commonest, most frequent expression is the mixed eruption, with the vesicular element predominating. In severe cases certain invasion symptoms in the shape of malaise, more or less fever, alternate hot and cold sensations, together with pruritus, are to be observed several days before the cutaneous manifestations declare themselves.

As regards the peculiarities of individual lesions, Duhring states that where the erythematous efflorescence prevails they are ill-defined, more or less circinate, small or

<sup>1</sup> On the Diagnosis of Dermatitis Herpetiformis, Am. Jour. Med. Sci., Feb., 1888.



large patches of inflammation upon which vesicular or quasi-vesicular lesions arise. Vesicles may be of pin-head size and numerous; at other times they are large and of different sizes. They have an herpetic character in general. The same general features are seen in the blebs. The pustules occur as a miliary eruption, or else they are sparse, and of the size of a pea or larger. The miliary lesions are flat, yellowish or whitish, occur in irregular or circinate patches, and at times give the surface a studded or punctate appearance. They are usually discrete. The larger pustules are generally surrounded with inflammatory, flat or raised, angry-looking bases, and have a drawn-up or puckered appearance. The pustular type is regarded as a severe form of the malady and has some analogies to impetigo herpetiformis, although this affection is no longer regarded by Duhring as identical with the disease described by him. When papules occur they are usually large, the size of small split peas, more or less ill-defined, and look like the similar lesions of an abortive herpes zoster. Pigmentations, some degree of crusting, and considerable thickening, scarring and evidences of scratching are prominent secondary features. Itching and burning are marked subjective sensations. Its course is variable, but usually chronic and of many years' duration. It tends to persist and occur in distinct attacks at irregular intervals. Relapses are the rule. Herpes gestationis, which is now regarded as belonging to this group of disorders, differs from dermatitis herpetiformis only in the fact that pustulation is a less frequent feature (Brocq).

Dermatitis herpetiformis is looked upon by most observers as a neurosis of the skin. This is rather a loose term, but it best expresses the conditions as exhibited in the lesional features of the malady and the constitutional peculiarities of the patients. At any rate, nervous exhaustion or nervous shock are factors of much importance in the clinical histories of many of the cases; but it must also be admitted that in a considerable number of instances the general health seems unimpaired.



Winfield<sup>1</sup> has reported four cases of apparently nervous origin, and in which the patients had sugar in the urine.

The occurrence of the disease in connection with pregnancy is well known, and Elliot<sup>2</sup> has met with two cases of dermatitis in which the climacteric period was probably the exciting cause.

Various observers<sup>3</sup> have shown the presence of eosinophile cells in the blood, and in the vesicles and surrounding tissues. Leredde and Perrin regard the cutaneous symptoms as an expression of an alteration in the blood, and this alteration determines the elimination by the skin of eosinophilous cells that are in excess in the blood. These latter observations would seem to show that the disease is toxic and not neurotic in character.

**DIAGNOSIS.** The disease must be differentiated from pemphigus, erythema multiforme and eczema. The diagnosis is based, however, not so much on any single feature of the disease, for it possesses lesions that are common to a number of other affections, but rather on the sum of symptoms presented and the history of the case. Dermatitis herpetiformis is especially characterized by the multiformity of the lesions, viz., papules, vesicles, bullæ, pustules, etc., as well as certain secondary changes due to them, such as pigmentation, cicatrices, infiltrations, etc.; the intolerable pruritus, and lastly by the constant tendency to relapse. Leredde has found in the blood a mean of 12 to 15 eosinophiles in one hundred white corpuscles, and in the bullæ from 30 to 95 per cent. of the total number of leucocytes. While they are found in the blood in lepra, leucæmia and secondary syphilis, and in the lesions of ecthyma, herpes and dysidrosis, it is asserted that only in dermatitis herpetiformis are eosinophile cells found in excess both in the blood and in the elements of the erup-

<sup>1</sup> Jour. Cutan. and Genito-urin. Dis., Nov., 1893.

<sup>2</sup> Am. Jour. Med. Sci., Nov., 1892.

<sup>3</sup> Valuable papers on the pathology of dermatitis herpetiformis have been published by Leredde and Perrin, *Ann. de Derm. et de Syph.*, 1895, p. 451; Gilchrist, *Johns Hopkins Reports*, vol. 1; Darier, *Ann. de Derm. et de Syph.*, t. vii., No. 6, p. 842.



tion. It is possible, Leredde claims, in this way, to eliminate pemphigus and erythema from the diagnosis without waiting for successive attacks.

**TREATMENT.** The treatment, so far as regards the ultimate cure of the disease, is discouraging. Arsenic has undoubtedly much influence over the eruption, both in cutting short present attacks, and prolonging the intervals between them. It must be given in comparatively large doses. Sometimes the Asiatic pill seems to be more efficacious than Fowler's solution. Belladonna in the form of the tincture may be tried in cases refractory to arsenic, but it is not nearly so potent for good. Among other general remedies may be mentioned ergotine and quinine. I may mention for what it is worth that one patient with a marked case of the disease apparently recovered under the long-continued internal use of Garrod's compound sulphur tablets. The special condition of the patient at the time should also receive due attention. Duhring regards sulphur in the strength of two drachms to the ounce of excipient the most valuable of all local applications, except for the erythematous form of the disease. It should be thoroughly worked into the affected parts. Elliot advises ichthyol in the following form :

R.	Ammonii ichthyolat.,	gr. xxx.	℥j.
	Olei amygdalæ dulcis,		℥j.
	Aquæ,	q. s. ad	℥j. M.

This may be rubbed in several times a day and allowed to remain on the surface, or lint may be soaked in the preparation and kept in place by a bandage.

A lotion of sulphate of zinc, one ounce, to water, one pint, is also valuable. Lotions of carbolic acid and menthol give much relief to the itching. Soothing ointments are sometimes more agreeable than lotions, especially the unguentum vaselini plumbicum applied on cloths to excoriated regions. In the vesicular and bullous types Lassar's paste is a good application, and I have got much satisfaction from Pick's Linimentum exsiccans, to which has been



added fifteen per cent. oxide of zinc and one per cent. of carbolic acid.

PROGNOSIS. The prognosis is always grave, although temporary relief of the eruption may be obtained, and the patient made fairly comfortable by appropriate treatment.

#### HYDROA VACCINIFORME, SEU ÆSTIVALE.

This rare disorder was originally described by Bazin in 1855, but it is only in recent years that its identity has again been established. The disease makes its appearance in the first years of life and is said to undergo a spontaneous cure sometime after puberty, but in one of Graham's cases the patient was still afflicted at the age of 25. It is also stated that it is more common in the male sex (*hydroa puerorum*), but it is known to attack girls as well. In most instances the outbreaks occur in summer, but changes of temperature, hot or cold, and even artificial heat, may act as exciting causes. The eruption is generally anticipated by slight systemic disturbance and by local pain and burning. It begins, according to Bowen, either as vesicles or as small red elevations which speedily mature to vesicles or bullæ and often run together. Many of the vesicles become umbilicated and are surrounded by a red areola as in *vaccinia*. The center has a black or dark blue appearance caused by the underlying necrotic and hemorrhagic corium. Some of the lesions turn purulent. The necrotic center is finally converted into a thick black and quite adherent crust, which, when it eventually comes away, leaves a permanent variola-like cicatrix. As a general thing, there is no itching. The attacks usually last a few weeks. The eruption is most common on the parts of the body exposed to the heat of the sun, that is, the bridge of the nose, cheeks and ears, and sometimes, when uncovered, the legs. Whether the various diseases described by writers, as *hydroa puerorum*, summer prurigo, etc., represent different phases of the same malady may be open to some doubt, but, nevertheless, there remains a group sufficiently definite for clinical recognition.



The treatment is not promising. It has been recommended to use veils of red or turmeric colors to neutralize the chemical rays, or to smear the parts with a brown pigment. During an actual attack the blisters may be opened and the surface dressed with a modified diachylon salve containing a scruple or two of aristol to the ounce.

### EPIDERMOLYSIS.

This bullous affection, also called *acantholysis bullosa* and *dermatitis bullosa*, is characterized by blebs that appear on the skin in response to local irritation, even of the slightest kind. This tendency first appears in infancy and would appear to be permanent, although it is said to decrease towards middle life. It appears to be hereditary and may affect several members of a family ; is most apt to occur in summer, and is often accompanied by hyperidrosis. The bullous lesions may be preceded by some itching and redness, or they appear without appreciable precursory symptoms. The blebs are of various sizes, and may be clear, purulent or hemorrhagic, and upon their disappearance leave no sign. In some of the reported cases deformity and destruction of the nails has been noted. Payne<sup>1</sup> presents the characters of this disorder in the following way :

1. Bullæ varying in size are produced on the body by friction or any injury, but not otherwise.
2. The bullæ are often hemorrhagic.
3. The nails are often affected by similar injury, becoming deformed or even quite destroyed.
4. There is no disturbance of the general health.
5. The affection is congenital, or at least dates from infancy, and sometimes occurs in several members of the same family.
6. It is unaffected by drugs or other treatment, though its severity seems to depend partly upon the state of the general health.

Elliot<sup>2</sup> made microscopical examinations of fresh bullæ and found evidences of inflammatory infiltration about the vessels of the cutis, and regards the malady as a dermatitis developing in an individual with an

<sup>1</sup> *Lancet*, Aug., 1893.

<sup>2</sup> *Jour. Cutan. and Genito-urin. Dis.*, Jan., 1895.



acquired or hereditary exaggerated irritability of the cutaneous vascular systems.<sup>1</sup>

### ECZEMA.

Eczema is an acute, or chronic, non-contagious, inflammatory disease of the skin, characterized by multiformity of lesion, and the presence, in varying degrees, of itching, infiltration and discharge. As will be seen presently, the secondary changes in eczema are also varied, and include crusting, fissuring, scaling, etc. A great gain has been made toward a proper conception of the disease by the recognition of its protean character. In former times, before Hebra's investigations shed such light on the subject, the one morbid process that we now inclusively call eczema was regarded as so many distinct diseases, and, according to the predominance of the elementary lesion in a given case, was variously denominated lichen, impetigo, pityriasis, and so on, the vesicular form only being looked upon as eczema proper. Even so recent a writer as the late Tilbury Fox insisted that eczema was essentially a vesicular disease. On the contrary, an eczema may run its entire course without the appearance of a vesicle, the only lesions present being perhaps papules, or an erythematous state of the skin. Often, indeed, all of these forms may be present at the same time; but whatever external features the disorder may assume, the underlying pathological conditions are to be recognized by their constancy under all circumstances, the varying and shifting clinical expressions forming only so many different links in a single chain. Thus, there may develop erythema, vesicles, papules, pustules, or presently a raw and weeping surface, the formation of crusts, or finally desquamation. Then again these elementary forms may be more or less interchangeable, or they may stop short at a given stage. For

<sup>1</sup> References: Beatty, *Brit. Jour. Derm.*, Aug., 1897. Full reports of published cases: T. C. Fox, *Brit. Jour. Derm.*, Sept., 1897; Hallopeau, *Ann. Derm. et de Syph.*, t. vii., 1896; Augagneur, *Ibid.*, June, 1897.



instance, the erythematous and papular lesions may develop into vesicles, vesicles into pustules, or each may retain its special features throughout. It may be said that eczema always begins as a congestion of the skin, and always ends in desquamation. When the disease finally disappears, the skin regains its normal appearance, although in some cases, especially on the legs, there remains behind a certain degree of pigmentation. Eczema differs from other inflammations of the skin in its exudative feature, in which it bears a close likeness to the catarrhal inflammations of mucous membranes. This exudation possesses the peculiar power of stiffening and staining linen. It is not absolutely true, as has been claimed, that eczema is invariably a "moist disease," for certain cases never develop this feature, at least spontaneously; but even a dry papular or erythematous eczema may be made to exude the characteristic catarrhal discharge through the influence of slight external irritation.

In a general way eczema may be said to develop symmetrically; thus if it is found on one hand it usually occupies a corresponding situation on the other, and so on the legs; but it is not invariably and constantly bilateral like psoriasis, for frequently enough it may be seen in large or small patches on indifferent parts of the body. The disease is rarely universal except in very elderly or unusually weakly subjects, and the general health suffers but little, notwithstanding the often free discharge and the nervous erethism induced by scratching and loss of sleep.

Eczema is more frequently seen in its chronic form. Like catarrhal inflammations in general the tendency to relapse is one of its pronounced characteristics. In order to obtain a still more definite idea of the clinical aspects of the eczematous process, it will be of advantage to make a brief survey of the more prominent symptoms of the disease. These may be divided into the objective and subjective.

OBJECTIVE SYMPTOMS. Redness of the skin, the result



of active, or even passive, hyperæmia is a never-failing characteristic of the disease. It may be looked upon as the initial stage of eczema, and sometimes subsides without further changes. This redness usually does not occupy sharply defined areas, but shades off insensibly into the surrounding unaffected skin.

According to the degree and extent of the inflammation, the exudation may be sufficiently great to remove the upper layer of the cuticle and gain access to the free surface in the form of a discharge without the previous existence of vesicles or papules. Pye-Smith insists, however, that this weeping stage is due to the rupture of minute vesicles, and that even the papular forms of eczema should be regarded as abortive vesicles. Under other circumstances pointed red papules make their appearance, or the epidermis is raised and vesicles are formed, or pustules may develop. These lesions may rapidly disappear and leave a dry scaling surface in their wake, or the wall of the vesicles and pustules may rupture and give rise to a serous or purulent discharge, which dries in crusts and scales. Desquamation is the final stage of an eczema, and it may supervene not only on the forms last described but follow a purely erythematous inflammation. Another objective symptom of great importance is thickening or infiltration. This symptom is always present, and although in recent and superficial forms of the disease it may be only appreciable by comparing the involved region with the healthy skin, when the eczema has extended and become chronic the infiltration may include the whole thickness of the derma and the fatty layer. So long as any of this thickening continues the eczema is not cured, the itching will continue and the disease will be apt to return with renewed intensity. In certain situations, such as about the joints and on the palms and soles, owing to the infiltration of the skin and its consequent inelasticity, painful cracks and fissures are often observed.

**SUBJECTIVE SYMPTOMS.** The eczematous patient rarely complains of any other subjective sensations than itching,



burning and a feeling of rawness. It may be stated in fact that eczema is the itching disease *par excellence*. The degree of pruritus will vary according to the age of the patient, the extent and location of the disease and the character of the predominant lesion, etc. Papular eczema is probably the most, and pustular eczema the least, annoying in this regard. Under some circumstances the sensation amounts to little more than a slight burning or tingling, which may even be pleasurable, or again it may give rise to the most excruciating agony, the patient beating, tearing or gouging the skin with ungovernable fury, and only after the skin has been torn and lacerated, thereby causing a free exudation on the surface, will he desist. I have often seen strong men completely exhausted after such a proceeding.

#### Acute and Chronic Eczema.

Clinically, and from the standpoint of treatment, eczema may be divided into the acute, sub-acute and chronic varieties. An acute attack of eczema may be ushered in with some slight degree of constitutional disturbance, but often no such disturbance is apparent; the local symptoms, however, exhibit the usual signs of inflammation, viz., burning, tingling or itching, together with redness, heat and swelling, to be followed by some one or several of the forms of the disease presently to be described. On the other hand, the disease may, and generally does, begin more insidiously, and is sub-acute from its inception. In this latter condition the pruritus and infiltration is moderate in degree, but at any time, from a variety of influences, the more acute process may supervene or, the disease continuing, the thickening and itchiness become more marked, other secondary changes occur, and the eczema lapses into a chronic stage which may last for years.

As stated above, eczema is characterized by a polymorphous eruption consisting of erythema, papules, vesicles, etc., and, moreover, any one of these lesions may be present singly, or more or less together, or else one lesion may be converted into another; still at times one or another of



these elementary forms may so predominate as to establish the anatomical general type of the eruption. These may be now separately taken up and described.

### **Eczema Erythematosum.**

Erythematous eczema makes its appearance in the shape of ill-defined, red and somewhat infiltrated patches, accompanied by burning, tingling and itching. It may disappear rapidly or else come and go under the influence of various exciting causes, or it may persist for lengthened periods, the skin becoming much thickened and covered with light scales. It is commonly confined to limited regions, as on the face, or where two surfaces are in contact (e. intertrigo), or very rarely the whole body is involved. The shades of color will vary from a light red to a reddish purple or even a tawny, leathery hue.

### **Eczema Papulosum.**

Papular eczema is most apt to appear on the extensor surfaces. The papules are usually red, acuminate, pin's head in size, and may be closely grouped on a reddened base, or else scattered irregularly over the surface. In chronic cases the lesions may run together, forming leathery, scaling patches, the separate papules completely losing their identity, or, if the parts are much irritated from scratching, an eczema rubrum will result. The papular type may persist throughout the course of an attack, but at other times there will be present abortive papules, vesico-papules and typical vesicles or even pustules. Papular eczema was formerly called lichen.

### **Eczema Vesiculosum.**

Instead of being the only typical expression of the disease, vesicular eczema is in my experience one of the rarer manifestations, although vesicles and vesico-papules are not uncommon concomitants of other varieties. Vesicular eczema usually runs an acute course, the lesions consisting of pin's point to pin's head sized elevations of the epi-



dermis, containing clear or, after awhile, somewhat opaque fluid. The vesicles are either discrete or more commonly closely aggregated on a reddened base. Burning and itching are pronounced. The vesicles soon rupture spontaneously, or else their roofs are torn off by scratching, and the exuded fluid dries in crusts, or there is exposed to view a raw and weeping surface. Under appropriate treatment the lesions may dry up without rupture and the affected surface will remain red and scaly. Quite often the vesicular stage is very evanescent, and the case is seen after secondary changes have supervened. Acute vesicular eczema is common on the hands. Finally, the vesicles may be converted into vesico-pustules and pustules.

### **Eczema Pustulosum.**

This form has been variously termed eczema impetiginodes, eczema impetiginosum, etc. The pustules are usually larger than the vesicles, and commence either as pustules, or as vesicles that subsequently become purulent, or both elementary lesions may coexist. The presence of pus-cocci and a favorable soil are, however, the responsible factors in the development of the pustules. Pustular eczema is perhaps the least pruritic variety of the disease. When the pustules burst, the exudation dries up in thick, yellowish or yellowish green crusts. It is common on the scalps and faces of ill-nourished children, and in persons who are below par generally.

Having now described the various elementary features that eczema may assume, it remains to consider certain secondary changes that sometimes follow in their wake; which are, indeed, the phases of the disease that are met with most frequently in practice.

### **Eczema Rubrum.**

Eczema rubrum, or madidans, may supervene on any of the varieties just enumerated, and consists of a raw, red and weeping surface due to shedding of the upper layers of the epithelium, with consequent exposure of the rete.



In its most typical form it may be observed on the faces of children and on the legs of elderly people. The itching is very severe.

#### **Eczema Squamosum.**

Squamous, or scaly, eczema may follow any of the elementary forms of the disease, and is usually indicative of a decline in the activity of the inflammatory process. It occurs mostly in patches of variable size, that are red, infiltrated and covered with large or small scales. It is often met with on the scalp, on the back of the neck, on the face, and sometimes widely disseminated over the body. At times it is difficult to differentiate it from an ill-defined psoriasis. Mild grades of squamous eczema were formerly called pityriasis simplex and perhaps in many instances corresponds to what is to-day called seborrhœic eczema.

Other secondary conditions encountered in the course of chronic eczema have received appellations that more or less accurately describe the objective conditions present. Thus, when the infiltration is excessive and the skin is of a board-like hardness it is called *eczema sclerosum*; when there is notable hypertrophy of the papillæ, and the skin presents a diffuse warty condition, it is characterized as *eczema verrucosum*; if the deeply infiltrated skin is cracked and fissured the state is termed *eczema fissum*; and finally eczema occurring in children is spoken of as *eczema infantile*.

#### **Ulcers.**

Ulcerative lesions are not common in eczema, but they may be sometimes observed in unhealthy children suffering from the disease. Boils and abscesses, due to pus infection, may also be noted in similar conditions, and are kept up and disseminated by scratching. Varicose ulcers of the lower parts of the legs are very frequent complications of eczema.

#### **Eczema Parasiticum.**

Crocker calls attention under this name to a form of eruption resembling dry eczema, but which possesses a



more definite border than *eczema squamosum*. Its chief seat is on the legs below the knee, but he has also seen it on the arms. The lesions are small papules that run together to form red, scaly patches, with perhaps outlying papules. It is very chronic, unsymmetrical, and slowly spreads or forms new patches. The itching is not severe. H. Hebra also describes a parasitic *eczema*, but it is attended with discharge and the formation of crusts. It is situated on the neck and the flexures of the elbows and knees. Parasites have not been demonstrated in these forms of eruption. I have a number of times observed the circumscribed papular type of Crocker, but I have also seen a vesicular eruption having the general features of *eczema* and possessing a well-marked border. In some cases extension has occurred by means of an undermining of the periphery with fluid, the center of the patches being red and infiltrated and occupied by vesicles and vesico-papules. Relapse has been the rule, even after apparent healing.

Relying upon the usual clinical conception of the disease, writers have described a variety of other forms of *eczema*, such as neurotic *eczema*, diabetic *eczema*, seborrhœic *eczema* (q. v.), follicular *eczema*,<sup>1</sup> etc.

All observers agree that *eczema* is the most common of the diseases of the skin. My own statistics agree closely with those of other dermatologists. Thus in a total of six thousand seven hundred and twenty-four cases of skin

<sup>1</sup> Follicular *eczema* was first described as a special form of the disease by Morris. It begins in inflammation of the hair follicle. "Each inflamed follicle stands out on the skin as an angry-looking red pimple, the capillaries around are congested, and soon the skin is involved in the process. In this way red patches dotted with inflamed follicles are formed, which tend to spread by the extension of the inflammation from follicle to follicle. As a patch spreads on the edge it usually undergoes resolution in the center, desquamation takes place, and the redness fades into a yellowish stain. The itching is often most intense." It attacks by preference the extensor surfaces of the limbs. He regards it as parasitic and allied to sycosis. Jadassohn, as the result of a histological study of similar cases, does not regard Morris' disease as belonging to the class of *eczema*, but merely a folliculitis that does not undergo suppuration. He proposes the name "*folliculitis aggregata non-suppurativa*."



disease there were two thousand one hundred and forty-eight patients with eczema, or 31.40 per cent. of the whole number suffered from this disorder. Both men and women are subject to eczema, and it may be said that the disease spares neither age nor social condition; it is found in the rich and the poor, the young infant and the aged person. It is undoubtedly most frequent in infantile life, and, according to Bulkley, in the decade between twenty and thirty.

Putting aside for the present the question of the essential nature of eczema, it is quite clear that the disease may be evoked both by external and internal causes. Any form of irritant may set up an eczema; *e. g.*, chemicals, sugar, flour, lime, soap and water, rough underclothing, etc. Thus we find the disease in chemists, surgeons, bricklayers, plasterers, washerwomen, bartenders and grocers. A varicose condition of the veins is a common exciting cause. Cold must also be looked upon as a causative factor, for eczemas are generally worse in winter than in summer.

Among other very frequent exciting causes of the eczematous inflammation seborrhœa should be placed in the front rank, also the irritation set up by excessive sweating, and the influence, primarily or secondarily, of micro-organisms.

Wilson was in the habit of saying that eczema was invariably due to either nervous, nutritive or assimilative debility. Undoubtedly nervous exhaustion, the strumous state, and conditions of malassimilation greatly favor the production of the disease. In my personal experience the majority of eczematous subjects suffer from some form of gastro-intestinal derangement. Gout, rheumatism and allied states may also be regarded as exciting causes; so also may malaria. My observation furnishes me with no case illustrating the connection of eczema with asthma (Trousseau, Bulkley), but the coincidence of the affection with uterine disorders (Hebra), pregnancy, lactation, the climacteric period, etc., I have often witnessed.



Eczema is not hereditary in the sense that syphilis is, but it is common to find that eczematous parents have eczematous children. Here the predisposed and susceptible skin is inherited rather than a diathesis.

While I cannot agree with a certain school of writers that looks upon eczema as a diathetic state depending upon a condition of system at one time called dartrous, at another rheumic, or again gouty, I am as far from agreeing with those that regard it as a simple dermatitis invariably due to local causes. An eczema is a dermatitis, but a dermatitis is by no means an eczema. I may state that my experience has taught me to see in the eczematous a specially vulnerable and susceptible cutaneous system, and that under given conditions the disease may be evoked by any cause, external or internal, that will arouse that susceptibility. For example, gout may be the *fons et origo mali* in one case, while a local irritation may be the exciting cause at another time. Once brought into existence, however, the disease displays features that are absent from a dermatitis, occurring in the non-eczematous.

DIAGNOSIS. If the chief features of eczema, as given above, be borne in mind, the difficulties of diagnosis are as a rule not very great; but the following diseases may, under certain circumstances, bear a sufficiently close resemblance to it to warrant a degree of circumspection in coming to a conclusion, especially in ill-defined examples of the respective affections.

#### Acne Rosacea.

This disease has a superficial resemblance to erythematous eczema; but the presence of acne papules and pustules, the absence of decided itching, and especially, in a late stage, the telangiectases will sufficiently distinguish it from the latter affection.

#### Erysipelas.

A very common error is to confound erysipelas with erythematous eczema of the face, but the points of difference



are well-marked. Erysipelas is a constitutional disease accompanied by fever; eczema is without any definite systemic reaction, and is non-febrile in character. The eruption in erysipelas begins at a single point and involves the parts by a "creeping" process, the line of demarcation between the sound and affected skin being sharply defined; in eczema the inflammatory process does not begin at a point and spread forward, but the whole region that is to be affected is affected at once, and the reddened area shades off imperceptibly into the sound skin. In erysipelas the tissues are tense, shining and brawny to the touch; in eczema the dermatitis is more superficial. In erysipelas the subjective sensations are of burning rather than itching as in eczema, and in erysipelas there is no discharging surface, except from the rupture of large bullæ, that appear late in the disease. There is no such thing as a chronic erysipelas, whereas an eczema may persist for a long while and exhibit considerable thickening and scaling, together with marked pruritus.

### Herpes.

It is rarely possible to mistake herpes zoster for eczema, but as this error is sometimes committed, it is well to remember that zoster always presents peculiarly grouped, large vesicles that follow the lines of the cutaneous nerves, and that the patient complains much of pain of a neuralgic character. In eczema, on the other hand, the vesicles are smaller, rupture readily, have no special grouping and do not follow a nerve tract; the subjective sensations are those of itching.

### Urticaria.

Papular urticaria, sometimes called lichen urticatus, has a close resemblance to papular eczema; at times the differentiation is difficult, but as a rule the urticarial element may be detected.



**Pemphigus.**

The ordinary form of pemphigus, with its large, discrete blebs, is very distinctive in character; but pemphigus foliaceus, especially at certain stages, looks very much like eczema rubrum (see *Pemphigus*).

**Scabies.**

Eczema and scabies resemble each other very much in clinical symptoms; indeed Hebra classed scabies among the eczematous affections. Both diseases itch at night, both have multiformity of lesion, but in scabies there is usually history of contagion, and the affection occupies certain definite regions of the body, viz., between the fingers, at the wrists, the axillæ, the pubic region, especially the penis in the male, and under the breasts of women, the buttocks, the inner sides of the thighs, and, in fact, wherever there is heat and moisture; consequently scabies is never seen on the faces of adults, and rarely on the feet; but in infants these situations are not exempt. Eczema is rarely so scattered, but is more apt to occur in patches. The discovery of burrows and the acarus itself is of course absolute demonstration, but often enough these cannot be found, and we must rely on the signs of differentiation just given.

**Psoriasis.**

Certain ill-defined types of psoriasis are not unlike patches of scaly eczema. In psoriasis, however, the disease is always symmetrical, occurring especially on the elbows and knees, itching is not a prominent feature, there is no history of discharge, the scales are larger and whiter than in eczema, and when scraped off display a punctate bleeding surface. Eczema is to be seen on the flexor, and psoriasis on the extensor, surfaces; the patches of psoriasis are sharply defined, and do not shade off into the surrounding healthy skin as do those of eczema, and, moreover, they clear in the center, while those of eczema tend to heal first at the periphery.



### Syphilis.

When eczema is limited to the palms and soles it bears a close likeness to syphilis of these parts. Eczema is apt to be symmetrical, the patches have no defined border and are irregular in outline; in syphilis a single palm or sole may be affected, the patches are defined with a wall-like margin and have a circular or semi-circular form.

Eczematous ulcers of the legs may be confounded with the similar lesions of syphilis, but it should be remembered that the ulcers of eczema are apt to be painful and irritable, complicated with varicose veins, and situated, as a rule, on the lower third of the limb, while the syphilitic ulcer is more indolent, less painful, or, if painful, more so at night, and generally occupies the upper third of the leg.

A superficial ulcerating form of syphilis occurring upon the scalp has a decidedly eczematous look, but the offensive odor of the discharge, and the destruction of tissue which will be revealed upon removal of the crusts, will sufficiently distinguish it from eczema.

### Dermatitis Exfoliativa.

This condition is to be distinguished from eczema by the absence of marked itching, the character of the scales, and the fact that there is neither discharge nor infiltration of the skin.

### Lichen Planus.

Both diseases itch, and the elementary lesion in both is a papule; but the papule of lichen remains such throughout, while the similar lesions of eczema may undergo various modifications; the papules of eczema are pointed or rounded, and are of a bright red color; those of lichen planus are flat, angular, somewhat depressed in the center, and have a dull, crimson-red color and a peculiar shining aspect. Lichen planus leaves behind a characteristic pigmentation, which is not the case in papular eczema. While the lesions of lichen planus may run together, forming large, thickened and scaling patches, a few isolated papules



may generally be detected, which by their characteristic appearance will establish the diagnosis.

Other disorders that may at one time or another resemble eczema are *seborrhœa*, *intertrigo*, *lupus*, *tinea circinata*, *tinea favosa*, *alopecia pityrodes capillitii*, *prurigo*, *pruritus*, *purpura*, *sycosis*, *pediculosis*, *impetigo*, *impetigo contagiosa*, *pompholyx*, *dermatitis*, *erythema* and *pityriasis rubra pilaris*.

For the special features of these various diseases the reader is referred to the sections treating of them.

**TREATMENT.** The question as to whether internal treatment should have the precedence of local measures or vice versa is of no practical importance. The wise practitioner, as has been acutely said in another connection, is presented with a condition and not a theory. He has an individual to prescribe for and not the name of a disease, and therefore will act accordingly. But before proceeding further, it is well to delay a moment to answer a question that is sometimes still asked, namely, whether it is advisable to cure an eczema at all? Whether the sudden healing of an eruption may not set up serious internal disturbances, especially in children and elderly people? The matter would hardly be entertained at all, based as it is upon an obsolete pathology, if this view did not linger as tradition among the laity.

There need be no fear of curing an eczema as rapidly as possible, as an abundant experience has shown that not only no harm comes from it, but that the general well-being is promoted when a source of pain and irritation has been removed. Hebra suggested that when the protest against a cure comes from a physician it is quite likely that it is due to failure on his part to effect it.

The person subject to eczema should be on his guard against all irritants, external and internal. Among the former may be mentioned chemicals, rough clothing and the injudicious use of soap and water. Care should be taken to select as bland a soap as possible, and while frequent bathing and vigorous friction of the skin is to be



commended for most people, those with delicate and susceptible integuments may do great mischief by a too fanatical devotion to the bath.

Patients should be warned against the habit of scratching, and particularly against the use of hair gloves, flesh brushes, etc. The food should be nutritious and unstimulating, fried articles, pickles, cheese, nuts, pastry and oatmeal, gravies, hashes, sauces and an over indulgence in sweets being prohibited. Alcoholic and malt liquors are objectionable. Tobacco, especially in eczemas about the anal region, as a rule does harm. Tea should not be allowed at all, and coffee very sparingly, generally not more than one cup a day. For further details as to diet and hygiene the reader is referred to the section on acne.

As regards internal medication in eczema, it must be emphatically insisted upon that we have no specifics, no remedies that are "good" for eczema, and that the whole class of supposititious blood purifiers are generally worse than useless, indeed often positively injurious. The disease is best managed in a symptomatic way. If nervous exhaustion, indigestion, uterine derangement, gout or malaria are apparent complications they must be removed if possible, even if one is not perfectly sure that one or the other is directly responsible as an exciting cause. Frequently enough the only appreciable cause is local, or else there is none at all; consequently it is not incumbent upon the physician to imagine one and to prescribe a remedy to meet it. In most patients, however, that come to consult us a searching examination will reveal some deviation from the standard of health, and, as just stated above, it is the physician's duty to remove any complication that may exist. The old plan of active purgation, whether indicated or not, is not to be recommended, but as constipation is one of the most frequent derangements that is met with in eczematous persons, attention should be directed to its relief. Ordinarily, the well-known hygienic measures—regularity at stool, the drinking of water in sufficient quantity between meals, etc.—are all that is required; but in more obsti-



nate cases recourse may be had to various tonic laxative remedies. Among the latter the pill of aloin, strychnia and belladonna is very useful, as also appropriate doses of the cascara sagrada or rhamnus frangula.

A serviceable formula recommended by Duhring and Stelwagon is as follows :

℞. Ext. cascarae sagradae fld.,                    ℥iv.  
 Acidi muriatici diluti,                    ℥ij.  
 Elix. calisayæ,                    q. s. ad ℥iv. M.

℞. A teaspoonful in a large wineglassful of water half hour before meals.

In acute eczema, more decided laxatives are required. The well-known *mistura ferri acida* is valuable.

℞. Magnesiæ sulphatis,                    ℥j.  
 Ferri sulphatis,                    gr. iv.  
 Sodii chloridi,                    ℥ss.  
 Acidi sulphurici diluti,                    ℥ij.  
 Infus. quassiaæ,                    q. s. ad ℥iv. M.

℞. Tablespoonful in a goblet of water half hour before breakfast.

The phosphate of sodium, in drachm doses, in a glass of hot water before breakfast, or even three times a day when required, is especially useful in lithæmic patients. I am not partial to the purgative mineral waters except as temporary expedients. The syrup of rhubarb, with or without magnesia, is a good aperient for children.

When dyspepsia exists, its relief is imperatively demanded. This, in my opinion, is best accomplished by diet. The usual remedies, such as the mineral acids, pepsin, the alkalies, etc., may be prescribed on general principles. In flatulent dyspepsia five grain tablets of the salicylate of strontium directly after meals is very efficacious, and especially valuable in the dyspepsias of rheumatic subjects. Resorein is also to be recommended internally in fermentative indigestions.

Erythematous eczema of the face associated with catarrh



or dilatation of the stomach is best treated by washing out that organ.

Alkalies are much used by Bulkley, especially when the urinary secretion is scanty.

R.	Potassii acetatis,	℥iv.
	Tr. nucis vomicæ,	℥ij.
	Infus. quassiæ,	q. s. ad ℥iv. M.
S.	Teaspoonful in wineglass of water after meals.	

In chronic forms of eczema, when the tongue is coated and the appetite impaired, Jamieson suggests the following mixture :

R.	Magnesiæ carbonatis,	
	Bismuthi carbonatis,	āā ℥ijss.
	Tr. rhei,	℥jss-℥ij.
	Syr. zingiberis,	℥vj.
	Sp. chloroformi,	℥ij.
	Aquæ,	q. s. ad ℥viiij. M.
S.	Tablespoonful in water, three times a day, after meals.	

Gouty patients will require alkalies and colchicum. If a rheumatic element is present the appropriate treatment must be instituted. The strumous and anæmic must be prescribed for according to their necessities. Iron is a sovereign remedy for delicate children, and the syrup of the iodide is one of the best preparations. Moreover in children, particularly those suffering from pustular eczema, cod-liver oil is indispensable. The most striking results are obtained from it in dispensary practice (see formula under acne). In an acute attack of eczema it will be best to take away tea, coffee and other stimulants, and to interdict the use of meat, the diet consisting of milk, steamed crackers, mush, stewed fruit and the usual fever fare.

The diet in the more chronic forms of the disease should not be especially restricted in quantity, but the digestibility of the articles eaten should be ascertained. The general directions as regards food should be on the lines indicated above, since in my experience, even when there is no appreciable dyspepsia present, the eating of indiges-



tible and unsuitable substances always reacts disastrously on the eczema. There are certain other remedies that are administered in eczema, in a more or less routine way, in the belief that they have an especial effect on the disease. One of these at least has been regarded as almost specific in its action. I refer to arsenic. While not disputing the efficacy of this drug in a small number of cases, I believe that most dermatologists would deny to it anything like a specific effect, and would quite sharply limit its range of employment. It should never be given in acute attacks of eczema, and in my own experience any great good from it, even in chronic phases of the disease, cannot always be expected. Its chief value is in the dry, scaly forms of eczema, and in affections of the nails. The drug is best given I think in the form of Fowler's solution combined with some preparation of iron.

R.	Liq. potassii arsenitis,	ʒj-ij.
	Vini ferri,	ʒiv. M.
S.	Teaspoonful in wineglass water directly after meals.	

R.	Vini ferri,	ʒjss.
	Syrupi simplicis,	
	Liq. potassii arsenitis,	āā ʒij.
	Aquæ destillatæ,	ʒij. M.
S.	Teaspoonful in water after meals.	

*Wilson.*

Arsenic should always be given immediately after meals, and I believe that more good can be obtained from small doses than from large. The initial dose for the adult may be a couple of minims, gradually increased, if necessary up to five minims, but beyond this it is not advisable to go. Of late years Mr. Malcolm Morris, of London, has revived the use of the wine of antimony in acute eczema. It should be given in about five-minim doses three times a day. I have found it useful. Dr. Crocker recommends turpentine internally in uncomplicated cases where there is no alimentary irritation. It should be given in emulsion in the dose of ten minims three times a day after meals,



but this quantity may be increased by five minims at a time till twenty or thirty minims are reached ; at the same time, as a diluent, the patient should take as much as a quart of barley water a day.

The same writer has tried the effect of counter-irritation in frequently recurring eczema. If the disease affected the upper half of the body it was used at the nape of the neck ; if the lower half, it was applied over the lumbar enlargement. The counter-irritant advised is either dry heat, a mustard leaf or the liquor epispasticus. I have generally made use of the prepared mustard leaves. In some cases the result has been very gratifying in my hands.

While as a general thing local treatment affords us the best means against the intolerable pruritus of eczema, there are cases, especially of widespread disease in elderly people, where such measures are ineffectual, and we are obliged to try one expedient after another.

The preparations of opium are inadmissible, as they increase the cutaneous irritation, and when it is necessary to procure sleep it will be better to give chloral, sulfonal and such like preparations. The elixir of the valerianate of ammonium is quite useful in nervous and hysterical patients. There would be little difficulty, however, in procuring sleep if the itching could be allayed. A number of preparations may be tried for this purpose. Bulkley speaks well of gelsemium given at first in ten-drop doses, repeated and increased every half-hour until the patient is relieved, or until physiological symptoms are experienced. I have never got much good from it. The wine of antimony sometimes does very well. Pilocarpine by the mouth or hypodermically is worth trying in suitable cases. Phenacetine is also a valuable remedy. The late Hilton Fagge recommended quinine to allay itching. Dr. Pye-Smith says that it is particularly useful in children, a half grain being given to a child of one year an hour before bedtime, a grain if a year older, and as much as five grains at the age of fifteen. It is an old prescription with me, and I am in the habit of giving an adult ten grains at bedtime.



Savill<sup>1</sup> has recently strongly advocated the chloride of calcium in the pruritus of eczema and other affections. It is advised in twenty-grain doses largely diluted after meals. It also may be administered in the form of the liq. calcii chloridi, B. P., giving from fifteen to forty drops, well diluted, three times a day. It appears to be a remedy of considerable value.

The local treatment of eczema is of the greatest importance. In quite a large proportion of cases internal remedies are not demanded at all, either because the disease has been evoked by purely local agencies, or because the internal exciting cause has ceased to be operative, and there remains only the effects, which must be got rid of by topical means. Although there is a vast array of preparations for application in eczema, all more or less useful when judiciously employed, there are after all two vital underlying principles that should never be ignored. These are *rest* and *stimulation*. Their application will depend upon the stage in which the eczema happens to be. By rest is meant something more than the usual surgical significance of the word; it means, in the sense we use it, freedom from all sources of possible irritation—for example, not only immobilization of a part, but exclusion of air, the discontinuance of the irritating effects of soap and water, the use of fixed dressings and, most important of all, relief of pruritus, so that the patient is not constantly tempted to disturb the affected surface by scratching. On the other hand, in cases of a more chronic character, when the skin is greatly infiltrated, the object of treatment is to cause resorption of effused material by stimulating remedies, or sometimes, indeed, by using very active local stimulants to induce an acute and more manageable affection in place of a chronic and intractable one.

In order, however, to determine more accurately the pathological state of the skin, and to prepare it properly for the reception of the appropriate remedy, it is an absolute essential that the parts be freed from scales, crusts

<sup>1</sup> *Lancet*, Aug. 1, 1896.



and other secondary products. For the removal of crusts repeated soakings in a bland oil are much preferable to poultices. Occasionally it is allowable to use a strong detergent soap, such as Bagoe's olive soap, but as a general thing the fixed rule never to wash an eczema is always to be respected. So soon as the stage of the disease has been determined, whether acute, subacute or chronic, and all the other features of the case have been fully considered, such, for example, as the age of the patient, the length of time the eczema has existed, and also the seat of the complaint, the question will then arise as to what form of local treatment will prove of the most service. The proper answer to this question often makes the difference between success and failure. I shall, therefore, now describe somewhat in detail the various topical preparations that are used in eczema, specifying the conditions to which they are applicable, and after doing this the clinical features and special therapeutics of eczema as it affects the various regions of the body will receive attention.

**LOTIONS.** According to circumstances lotions may be soothing, drying and astringent, or stimulating. They should rarely be used in the hair, or where there is much discharge, and, except in the early stage of acute vesicular eczema, their principal rôle is in the erythematous and papular varieties of the disease. When acute inflammation is present the lotion should be kept constantly renewed; under other conditions it serves its purpose best by being mopped on occasionally and allowed to dry. It should always be remembered that the skin has its idiosyncrasies, and that sometimes a salve or a powder will be efficacious where, theoretically, a lotion would seem to be indicated; and, of course, the reverse of this also holds true. In acute eczema the inflammatory symptoms may be greatly allayed by the use of sedative and slightly astringent lotions.

R.	Tr. opii,	
	Liq. plumbi subacetatis,	āā ʒij.
	Aquæ,	ʒiv. M.



Dr. Taylor recommends the following :

- |    |                          |      |    |
|----|--------------------------|------|----|
| ℞. | Liq. plumbi subacetatis, | ℥ij. |    |
|    | Tr. opii,                | ℥ij. |    |
|    | Tr. camphoræ,            | ℥j.  |    |
|    | Glycerini,               | ℥ij. | M. |
- S. To be mixed with a quart of water and applied on lint.

When extensive surfaces are involved the carron oil is valuable and inexpensive.

- |    |                   |      |    |
|----|-------------------|------|----|
| ℞. | Linimenti calcis, | ℥vj. |    |
|    | Creasoti,         | ℥vj. | M. |
- S. Apply on strips of cloth.

The black wash is employed by many dermatologists in acute eczema, and, used after the following manner, is highly praised by Dr. J. C. White, of Boston. He directs that the wash of full strength, or diluted with equal parts of lime water, be mopped on for ten or fifteen minutes at a time, the sediment being allowed to dry, and afterwards a little zinc salve should be gently smeared over the surface with the finger. This procedure may be repeated every few hours.

A favorite preparation in acute vesicular eczema is the well-known Startin's lotion.

- |    |                       |       |    |
|----|-----------------------|-------|----|
| ℞. | Zinci oxidi,          | ℥ss.  |    |
|    | Pulv. calaminæ præp., | ℥iv.  |    |
|    | Glycerini,            | ℥j.   |    |
|    | Liq. calcis,          | ℥vij. | M. |
- S. Shake.

Cheese cloth cut in strips may be dipped into this and bound on the parts with a roller. The cloths should be kept constantly wet. When merely a drying effect is desired, it may be mopped or painted on, and allowed to form a protective coating. Among other similar preparations may be mentioned grindelia robusta, one or two drachms to four or eight ounces of water ; liquor plumbi subacetatis, one-half ounce, and liquor carbonis detergens, two ounces



and a-half, of which a teaspoonful mixed with a pint of water may be mopped on several times a day.

Boeck's<sup>1</sup> lotion may be used with advantage in erythematous and papular eczemas. It is prepared as follows: talc and starch, of each, 50; glycerine, 20; lead water, 100. This is diluted with twice the volume of water, and then applied with a brush or mop. If the skin is very sensitive one-half of the lead water may be replaced by a one per cent. boric acid solution.

A drying lotion much used by English physicians is composed of nitrate of silver, sixteen grains, and sweet spirits of nitre, one ounce. It may be used on circumscribed patches of a subacute or chronic type, and in the form of the disease found between the toes and about the mammae (Liveing). Lotions of carbolic acid are of inestimable value in eczema.

R.	Acidi carbolici,	3j-iv.
	Glycerini,	3j.
	Aquæ destillatæ,	q. s. ad Oj. M.

This preparation is rarely indicated in acute cases, except of the papular form, but in the subacute and chronic stages there is nothing that will act so beneficially in allaying the pruritus. It may be mopped on with a rag, or where an extensive surface is involved and the skin is unbroken, it is best sprayed on with an atomizer.

For limited patches a somewhat different formula may be advised.

R.	Acidi carbolici,	3ij.
	Glycerini,	3ss.
	Alcoholis,	q. s. ad 3viij.
	Olei rosæ,	ʒij. M.

It may also be added with advantage to the zinc and calamine lotion, in the strength of a drachm to the pint. Menthol is a valuable addition to carbolic lotions.

<sup>1</sup> Monatshft. f. prakt. Derm., Aug. 1, 1895.



R.	Acidi carbolici,	℥ xl.
	Menthol.,	ʒij.
	Alcoholis,	q. s.
	Lotionis zinci oxidi comp.,	ʒviij. M.
S.	Mop on occasionally for itching.	

At times it is advisable to omit the compound zinc lotion, and to employ the menthol in the following manner:

R.	Menthol.,	ʒss-ʒij.
	Acidi carbolici,	ʒss.
	Alcoholis,	ʒj.
	Glycerini,	ʒj.
	Aquæ,	ʒiv. M.

Stimulating lotions are demanded in chronic, thickened eczemas.

One of the most valuable is Hebra's spiritus saponatus kalinus, made of two parts of green soap and one of alcohol. This should be thoroughly rubbed in with a piece of flannel, then washed off, the parts dried, and the surface protected with diachylon ointment spread on cloth. Tar may be added to the green soap lotion as follows:

R.	Picis liquidæ,	
	Saponis olivæ præp.,	
	Alcoholis,	āā ʒij. M.

A preparation much prized by Bulkley is called by him "liquor picis alkalinus."

R.	Picis liquidæ,	ʒij.
	Potass. causticæ,	ʒj.
	Aquæ,	ʒv. M.

This may be used as an antipruritic lotion of the strength of from one to four drachms to the pint of water, or may be rubbed into localized infiltrated patches of full strength. It also mixes well with an ointment base. Hutchinson's lotion is well known.

R.	Liq. plumbi subacetatis,	℥ x.
	Liq. carbonis detergentis,	ʒj.
	Aq. destillatæ,	q. s. ad Oj. M.
S.	Mop on affected parts twice daily.	



Duhring suggests as a substitute for the various proprietary tar preparations the following compound tincture: A strong tincture of quillaia bark is made by adding one part of the bark to four parts of 95 per cent. alcohol. One part of coal tar is digested with six parts of this tincture, with frequent agitation, for not less than eight days. It may be prescribed in the proportions of from three to fifteen minims to the ounce of water. A few minims of glycerine may be added.

According to the necessities of the case lotions made in various proportions of salicylic acid, sulphate of zinc, sulphur, thymol, etc., may be employed, and if still more decided stimulation is required we may use strong solutions of caustic potash; but of late years, and especially since the introduction of salicylic acid into practice, this procedure has been less employed.

**POWDERS.** Various substances in powder form may be used in eczema, but in my experience their range of application is not very great, as compared with other modes of treatment. They are indicated in acute erythematous eczema, extending over the greater part of the body, in sub-acute conditions when there is little or no secretion, and as driers and protectives in intertrigo. Sometimes, however, powders are better borne in acute vesicular eczema than anything else. Powders may often be used in the day, the salve or other preparation being employed at night. Powders are usually composed of lycopodium, oxide of zinc, bismuth, cimolite, boric acid, iodoform, iodol, corn starch and the useful terra silicea. They may be dusted on the skin directly with a puff, or shaken from muslin or cambric bags, or, as suggested by Unna, they may be put into long quilted bags for permanent application to a part. Anderson's antipruritic powder is well known.

℞.	Pulv. amyli,	3vj.
	Zinci oxidi,	3jss.
	Pulv. camphoræ,	3ss. M.

Another powder that I have found serviceable in erythe-



matous eczema about the scrotum, between the toes and under the breasts, is made in this way :

R.	Thymol.,	gr. j.
	Pulv. zinci oleatis,	℥j. M.

**LINIMENTS.** When large surfaces are affected with eczema, especially when the parts are red and moist, liniments will be found serviceable. Equal parts of lime water and olive or almond oil, to which may be added one per cent. of carbolic acid, makes an agreeable and soothing application. Crocker's calamine and zinc liniment is somewhat more astringent.

R.	Pulv. calaminæ præp.,	℥ij.
	Zinci oxidi,	℥ss.
	Olei olivæ,	
	Liq. calcis,	āā ℥j. M.
S.	Apply on linen.	

Skinner proposes the following formula :

R.	Calaminæ pur.,	℥j.
	Zinci oxidi,	gr. xv.
	Liq. calcis,	℥ss.
	Olei amygdalæ dulcis,	q. s. ad ℥j. M.

**OINTMENTS.** Most cases of eczema as seen in practice are best treated by ointments. They are particularly indicated in the stage of the disease exhibiting exudation and crusting, although, as will be seen presently, salves are also of great service in scaly and infiltrated eczemas. A good rule to follow in most cases is to begin with a soothing preparation ; to feel the way, so to speak, even if the disease look as if something more stimulating were required. Ointments should always be perfectly fresh, and to attain this object, as well as to secure experience in pharmaceutical manipulation, it is well that the physician should direct his patients to some apothecary in whom he has confidence.

One of the most commonly prescribed ointments is the benzoated oxide of zinc preparation of Wilson. To in-



crease its sedative action a drachm of the dilute solution of the subacetate of lead may be added to each ounce, and to render it antipruritic the prescriber may incorporate the same quantity of tincture of camphor. The unguentum aquæ rosæ, which, moreover, is one of the most valuable ointment bases, is very cooling to the inflamed skin, and it may also be rendered mildly astringent by adding to it oxide or carbonate of zinc in the proportion of a drachm to the ounce. Other formulæ are as follows :

℞.	Zinci carbonatis,	ʒj.	
	Acidi salicylici,	gr. x.	
	Vaselini,	ʒj.	
	Ung. aq. rosæ,	ʒj.	M.
			<i>Jamieson.</i>
℞.	Bismuthi oxidi,	gr. xv.	
	Acidi oleici,	ʒij.	
	Ceræ albæ,	ʒjss.	
	Vaselini,	ʒivss.	
	Olei rosæ,	℥j.	M.
			<i>Anderson.</i>
℞.	Glycerol. plumbi subacetatis		
	(Squire),	ʒj.	
	Ung. aq. rosæ,	ʒj.	
	Ceræ albæ,	q. s.	M.
℞.	Bismuthi subnitratis,	ʒj.	
	Ung. aquæ rosæ,	ʒj.	M.

Jamieson's ophthalmic ointment for use on the eyelids is very soothing ; it may be also employed as a base for other drugs.

℞.	Olei amygdalæ dulcis,		
	Aquæ,	āā	ʒss.
	Lanolini,		ʒij. M.

An ointment of much value in the so-called seborrhœal eczema is made of sulphur and salicylic acid.

℞.	Acidi salicylici,	ʒj-ʒss.	
	Sulphuris præcip.,	ʒj-ʒij.	
	Vaselini,	ʒj.	
	Olei limonis,	q. s.	M.







It will be observed that the amount of tar in this prescription is quite small, the object being to employ a quantity just sufficient to allay pruritus, and not to obtain the full stimulating properties of the drug. The various preparations of tar are of great advantage in eczema; but it should be remembered that in whatever form tar may be used, whether pure, in alcoholic solution or in ointment, it is a remedy that cuts both ways. It should always be applied tentatively in the beginning, and, as a general thing, reserved for the squamous forms of the disease.

R.	Olei rusci,	℥j-ij.
	Ung. aquæ rosæ,	℥j. M.

To be effectual, in cases that require it, a tar ointment should be thoroughly worked into the skin, at least two inunctions being made in the course of twenty-four hours.

Among numerous other substances advantageously made use of in the form of ointments for the treatment of eczema may be mentioned carbolic acid, salicylic acid, tannin, sulphur and mercury.

The mercurial preparations are of great value, but owing to liability of absorption they must be handled with caution and applied to limited surfaces at a time. Duhring speaks well of calomel in the strength of a half to one drachm to the ounce. Niemeyer extolled the virtues of the white precipitate. I have got much satisfaction from it used in the strength of from twenty to sixty grains to the ounce, or combined with tar,

R.	Hydrargyri ammoniati,	℥ss.
	Liq. picis alkalin.,	℥j.
	Ung. aq. rosæ,	℥j. M.

PLASTERS. Following Hebra's original suggestion of spreading salves on strips of lint, there have been introduced of late years many methods of making continuous applications in eczema and other diseases of the skin. Among the more valuable preparations of this class are undoubtedly the plaster and salve mulls of Unna. I have employed



these dressings since their first introduction, and can speak very highly of their usefulness in appropriate cases. The salve mulls are made by incorporating the desired remedy (zinc oxide, lead, mercury, etc.) with a base made usually of benzoated suet and lard, and spread on one or both sides of undressed muslin. The plaster mulls are made of gutta-percha faced with some adhesive substance containing the medicament, and backed with muslin. The dressings first mentioned, especially the diachylon mull, are useful in sub-acute eczema, and I have employed them where a fixed dressing seemed required, more particularly on the face and limbs. In acute cases they do not answer so well. The plaster mulls are of value in various forms of chronic eczema, the salicylic acid plaster mull doing excellent service in deeply infiltrated patches on the hands and feet. Of late years, however, these plaster mulls have been largely replaced by Pick's salicylated soap plaster or some modification of it.

R.	Emplast. saponis liq.,	℥ijss.
	Olei olivæ,	℥v.
	Acidi salicylici,	gr. xxxvij. M.

Klotz's modification is thus prepared : Diachylon plaster, 60 parts ; soap plaster, 25 parts ; yellow wax, 2 parts ; vaseline, 8 parts ; salicylic acid, 5 parts. For a five per cent. plaster Duhring recommends : soap plaster, ℥j ; olive oil and salicylic acid, of each 24 grains. For a ten per cent. plaster no olive oil is required, the salicylic acid softening the mass sufficiently. This writer's formula for a twenty per cent. plaster is : Lead plaster, ℥j ; yellow wax, gr. xlvij ; salicylic acid, gr. cv. The formula that I usually employ is as follows :

R.	Empl. plumbi,	℥xxv.
	Pulv. saponis,	℥iv.
	Aquæ,	q. s.
	Vaselini,	℥v.
	Camphoræ,	grs. xx.
	Acidi salicylici,	℥v. M.
S.	Spread on muslin.	



When necessary the percentage of salicylic acid may be increased.

PASTES. These preparations may often be used where an ointment proves irritating or otherwise unsuitable; and besides they provide an adhesive and protective dressing that is of the greatest utility in many cases. There are many formulæ for these pastes (gum, dextrine, kaolin, lead and glycerine), but in the treatment of eczema I have found the following the most generally applicable. The best is undoubtedly that of Lassar.

R.	Acidi salicylici,	℥ss.
	Zinci oxidi,	
	Amyli,	āā ℥vj.
	Vaselini,	℥ij. M.

This paste may be spread on strips of muslin, or, in more chronic and scaly patches, directly rubbed on with the finger. Fox advises the addition of five per cent. oil of cade to the above when more stimulation is demanded. The same authority recommends corn starch and bismuth in the place of the oxide of zinc and starch in the formula just given. Ihle's modification of Lassar's paste is made in this way:

R.	Resorcini,	grs. x-℥j.
	Lanolini,	
	Vaselini,	
	Zinci oxidi,	
	Pulv. amyli,	āā ℥ij. M.

Where large surfaces are involved I often prescribe with satisfaction Unna's oxide of zinc paste:

R.	Zinci oxidi,	℥j.
	Mucilaginis acaciæ,	
	Glycerini,	āā ℥ij. M.
S.	Apply with a brush several times a day.	

If the itching is severe one per cent. of carbolic acid may be added. Sometimes the glycerine disagrees, and the oil of sweet almonds makes a less irritating menstruum.



One of the very best combinations in subacute eczema contains bismuth.

R.	Bismuthi subnitratis,	℥ss.
	Zinci oxidi,	℥j.
	Pulv. amyli,	℥ij.
	Acidi carbolici,	℥x-xv.
	Vaselini,	
	(vel ung. aq. rosæ),	q. s. ad ℥j. M.

Dr. Elliot's Bassorin paste is made after the following manner :

R.	Bassorin.,	℥jss.
	Dextrin.,	℥vj.
	Glycerini,	℥ij.
	Aquæ,	q. s. ad ℥xxvss. M.

This may be variously medicated.

Pick's excellent linimentum exsiccans is thus prepared :

R.	Tragacanthæ,	gr.lxxv.
	Glycerini,	℥xxx.
	Aquæ,	℥xxvss. M.

A valuable protective coating is obtained by adding ten to fifteen per cent. of oxide of zinc and one to two per cent. carbolic acid to this preparation.

Unna's gelanthum, a similar preparation, has been slightly modified by Skinner.

R.	Tragacanthæ,	℥ijss.
	Gelatin. opt.,	℥ij.
	Glycerini,	℥vj.
	Thymol.	gr. ¼.
	Aquæ destillatæ,	q. s.

Place the tragacanth and gelatine each in ten ounces of water in covered jars, and make the final quantity up to twelve ounces with water. To this paste may be added resorein, salicylic acid and most other drugs except subacetate of lead.

GLYCERINE JELLY. Some years since Professor Pick,



of Prague, suggested the use of gelatine as a vehicle for various medicaments in dermatological practice. He employed a mixture of gelatine and water over which, after its application to the skin, was smeared on a thin layer of glycerine. Unna and Beiersdorf combined the gelatine and glycerine directly, and they found, moreover, that a definite relation must exist between the amounts of glycerine, gelatine and water taken and the percentage of drug employed. One of the best formulæ is as follows:

R.	Gelatinæ,	℥iv.
	Zinci oxidi,	℥ijss.
	Glycerini,	℥j.
	Aquæ,	℥x. M.

To the above may be added one per cent. of ichthyol. The gelatine preparation is prepared for use by being melted—the tin containing it being placed in a vessel of boiling water—and painted on the parts with a stiff brush. As the jelly does not dry at once, it should be covered over with a bit of tissue paper. In order to render the jelly more fluid, it being rather thick and tenacious, I always direct the patient to add sufficient water for the purpose.

PAINTS. Very similar in action and object to the other fixed dressings are the pigments made with collodion and traumaticine. For certain kinds of chronic eczema tar and chrysarobin may be thus combined. In eczema about the mouths of children I often use tar after the following formula:

R.	Olei rusci,	℥j.
	Collodii,	
	vel Traumaticin.,	℥j. M.
S.	Apply with a camel's hair pencil.	

In adding an oil to collodion the contractile variety should be prescribed, since the addition of an oil to the flexible preparation will render it hyperflexible. Piffard believes that contractile collodion will sometimes abort a



threatened eczema, or, if painted around the margin of an existing lesion, will tend to prevent its extension. Acetic cantharidal collodion is often useful as a blistering agent in small chronic patches of eczema.

Tar is efficaciously employed as an ethereal and alcoholic tincture, which may be painted on the affected region, and afterwards dusted over with an indifferent powder, or covered with any desirable ointment. Leistikow regards coal tar as a better anti-pruritic than wood tar, and, made after the following formula, as an efficient remedy in various forms of dry eczema, but it should not be applied too extensively for fear of poisoning:

R.	Coal tar,	3jss.	
	Alcohol,	(95%) 3j.	
	Sulphuric ether,	3ss.	M:
S.	Apply with a brush.		

**BATHS.** It may be stated as a broad general rule that water in any form is harmful in eczema. The less an eczematous surface is washed and bathed the better for it. Baths have not the same vogue in skin diseases that they had in former years, and, with the exception of an occasional alkaline bath in generalized papular eczema, they are now but little prescribed. The seashore and sea bathing are mostly highly injurious in acute forms of eczema, but sometimes in chronic localized patches the general tonic effect is of benefit to the skin affection; and the same may be said of the innumerable mineral and thermal springs of this country. A residence at the springs and copious drinking of the water, together with proper diet and hygiene, often give gratifying results, provided intelligent local treatment is carried out at the same time, and provided the physician will conscientiously shield the patient from the injudicious topical application of the waters—hot or cold—in improper cases.

**MASSAGE, SCARIFICATION and MECHANICAL APPLIANCES.** Massage sometimes acts well; it is indicated in the chronic, infiltrated forms of eczema, and, as a con-



sequence of stimulating the absorbents, the exudation is dissipated, the thickening decreased and the pruritus lessened. Multiple punctures and scarification are occasionally of benefit in small and very chronic patches of eczema. Support and compression with the rubber bandage is of especial value in suitable cases.

Having now given a brief general outline of the various internal and local measures that are useful in the management of eczema, I shall next proceed to a description of the special forms of the disease.

### **Eczema of the Scalp.**

The disease on the scalp may assume the pustular, vesicular and erythematous forms. Generally, however, when the case comes under observation the elementary features have disappeared, and we find only greenish-yellow crusts that occur here and there, or cover the head like a cap, or there is present a moist exuding eczema, or a chronic, more or less thickened, scaly and very itchy condition of the scalp. These various states may be present at one and the same time, but it is more usual to find one or the other predominating, or else the sole form of eczema present. The erythematous variety may commence as such, or it may supervene upon the other forms. Pustular eczema of the scalp is oftenest seen in children, in whom extension of the disease to the face and ears is of frequent occurrence. Marked swelling of the lymphatic glands in the back of the neck and behind the ears is a common accompaniment of the affection in children, although suppuration is very rare. Crusted eczema of the scalp in children is popularly called milk crust. In both children and adults the first step necessary in the way of treatment is to remove crusts when present. As a rule, poultices should be avoided, using instead free inunctions of olive or cod-liver oil. In children there is no objection to clipping the hair, but in grown persons, especially women, this must be avoided. Stiff ointments should not be applied to hairy regions, but preparations having vaseline, oil, al-



cohol, glycerine or water as excipients. The acute forms of eczema should be soothed, and for this purpose may be prescribed oil of almonds or sweet oil, containing one per cent. of carbolic or salicylic acid, or a lotion of the black wash mopped on for a few minutes at the time, followed by reapplication of the oil, or an ointment composed of a drachm of bismuth to the ounce of vaseline. After the inflammatory symptoms have abated, or if the case when first seen presents a subacute condition, I have found the greatest satisfaction from the salve of tar and zinc (R. Ung. picis liq., ʒj-ij; ung. aq. rosæ, ʒj; zinci oxidi, ʒj. M.). This should be spread on strips of cotton cloth and changed twice in the day. In babies with but little or no hair on the head the ung. vaselini plumbicum may be used in the same way. In acute pustular eczema, especially in relapsing cases, Duhring recommends ten to twenty grains of ichthyol to the ounce of olive oil, and in the subacute discharging form a salicylic-acid salve of from twenty-five to forty grains to the ounce. Both calomel and white precipitate ointments, if used cautiously and over a limited area, are valuable remedies. The scalp, however, stands tar exceptionally well, and in most cases of this sort it may be applied in the shape of an oil (R. Olei rusci, ʒj; olei amygdalæ, ʒj. M.); or in combination with alcohol (R. Olei rusci, ʒj; glycerini, ʒj; alcoholis, ʒvj; olei rosæ, q. s. M.). Somewhat pleasanter, and I believe more efficient, in chronic scaly eczema of the scalp is an ointment of salicylic acid and sulphur (R. Acidi salicylici, ʒj; sulphuris præcipitati, ʒj, vaselini, ʒj; olei rosæ, q. s. M.). This should be thoroughly worked into the scalp, and not merely smeared over the hair, once or twice a day. Resorcin in from three to twenty per cent. strength may be used in place of the salicylic acid. In refractory cases an ointment of tannin, one drachm and carbolic acid, ten to fifteen grains, to the ounce may be tried. Sometimes in very chronic eczema an ointment of tar and white precipitate will bring about a cure when other preparations have failed. (R. Hydrarg. ammoniati, ʒj; liq. picis alkalin.,



3j; vaselini, 3j. M.). When an eczema is set up by the presence of pediculi, it is obvious that these must be destroyed. The best remedy for this purpose is petroleum, which should be applied over night, and washed out in the morning with hot soapsuds, and followed by a soothing ointment.

### **Eczema of the Face.**

Any variety of eczema may occur on the face. The pustular, vesicular and papular forms are most frequent in children, the erythematous in the adult. Eczema erythematosum is particularly prone to attack persons in middle and advanced life, and is noted for its obstinacy and tendency to repeated recurrences. It generally develops suddenly, frequently being mistaken for erysipelas, and occupies with tolerable uniformity the forehead, nose, cheeks and eyelids, the latter often being completely closed by the swelling. The skin is of a dusky red, œdematous, and the itching and burning are very severe. In chronic types of the disorder the condition is even more deplorable; the skin becomes like leather, the lids are stiff with the infiltration, deep fissures are to be seen in the natural furrows and wrinkles of the skin, and the surface is covered with fine scales, except that here and there have been developed raw and oozing points due to scratching. It is not uncommon to detect a certain amount of papular eczema in connection with erythematous eczema of the face. The itching is intolerable and occurs usually in paroxysms. In children the eczema of this region most frequently presents the elementary forms above mentioned, but ordinarily the secondary results only are seen by the physician, viz., red, scaly and slightly thickened patches, or red and exuding surfaces more or less covered with crusts and scales, or the underlying surface may be entirely covered with thick crusts. The itching is excessive, and in order to get relief the parts are remorselessly torn with the nails, and the whole face at times is a mass of blood and pus crusts intermingled with deep excoriations. In infants, that cannot use the hands,



the face is rubbed against the pillow or nurse's shoulder. In other instances the eczema, usually of the pustular type, is situated about the mouth, the upper lip being considerably tumefied, and the nares partially closed.

In acute erythematous eczema of the face in adults the treatment must be of a soothing character, lotions being preferable (R. *Zinci oxidi*, ʒss; *pulv. calaminæ præp.*, ʒiv; *glycerini*, ʒj; *liq. calcis*, ʒvij. M.), or (R. *Zinci oxidi*, ʒss; *mucilag. acaciæ*, ʒj; *emuls. amygdalæ*, ʒij; *aquæ rosæ*, q. s. ad ʒiv. M.). When the first mentioned is employed it should be applied on cheese cloth cut to fit the parts; the last named preparation may be gently smeared on every few hours. If an ointment should seem to suit better, the *unguentum vaselini plumbicum* serves a good purpose, or one containing Squire's glycerole of lead (R. *Glycerol. plumbi subacetatis*, ʒss; *ung. aq. rosæ*, ʒj; *ceræ, albæ*, q. s. M.). In these acute cases it is well to secure a tolerably free action of the bowels, employing for this purpose the *mistura ferri acida*. In cases of a less inflammatory type, when there is moderate infiltration, the zinc-ichthyol gelatine is valuable, or the zinc and tar salve may be cautiously tried. As many patients are unwilling to wear ointments and lotions during the day, and in this lies the main difficulty of effecting a cure, the parts may be protected by Provan's paste (R. *Tragacanth*; *glycerini*, āā ʒiv; *boracis*, ʒss; *aq. destillatæ*, q. s. M.), which can be readily washed off at night; or the powdered oleate of zinc may be dusted on. When the disease is limited to the forehead the diachylon salve mull may be constantly worn under the inner hat band. This so-called sweat band is a prolific source of eczema, and I always order that a soft piece of cotton be pasted over the part that comes in contact with the skin. In my experience, even in very chronic eczema of the face, frictions with green soap and strong preparations of tar are ill-borne; but I find that the compound salicylic acid plaster (see above) neatly spread on muslin, and snugly adjusted to the parts, is of great value. In children the crusts should be removed by inunctions



with sweet oil, or by applying at once the unguentum vaselini plumbicum spread on muslin strips. This latter ointment may be then continued, being renewed twice in the day—and in pustular eczema there is nothing better—or in somewhat moist or scaly patches the tar and zinc may be employed. Of late years I have come to use largely in the eczemas of children a tenacious ointment or paste made after the following formula: (℞. Zinci oxidi, ʒj; pulv. amyli, ʒij; ung. picis liq., ʒij; ung. vaselini plumbici, q. s. ad ʒj. M.). Another preparation of value is given on a preceding page under “pastes” and is composed of bismuth, zinc and starch. The amount of carbolic acid in the formula should be decreased for children. As a rule, salves should be applied by means of muslin strips kept in place by a light skeleton mask. A very valuable remedy for children is the Lassar’s paste either spread on muslin, or in papular and scaly eczema merely smeared on with the finger. It dries to a thin adhesive powder, which allays itching, affords the needed protection and is not readily scratched off.<sup>1</sup> It is especially true of the eczema of children that the affected surfaces *must not be washed*, as thereby all the good accomplished by the appropriate remedy is sacrificed in a few minutes. Eczema about the mouth is quite difficult to heal, particularly in children, owing to the free movement of the parts, and the irritating effects of nasal discharges, saliva and the passage of food. It is here necessary to use a fixed dressing, and I am in the habit of employing a pigment of tar for that purpose (℞. Olei rusci, ʒj; collodii (contractile) vel traumaticini, ʒj. M.).

#### Eczema of the Ears.

Eczema of these parts should be carefully distinguished from erysipelas and lupus erythematosus. It is more common, perhaps, in children with eczema on the head or face, but it also accurs in adults in the same connection, or alone.

<sup>1</sup> Unless these pastes are well made they do more harm than good.



The various forms of the disease are to be seen here. In acute eczema the ears are red, swollen and tender; in the chronic type the parts are board-like, fissured and scaling. Exacerbations and relapses are frequent. Acute and chronic eczema of the external auditory meatus is common. The patient complains of deafness, pruritus and a sense of fulness, and the canal becomes clogged with epithelial scales and cerumen.

In acute eczema of the auricle the usual soothing remedies are indicated, such as the calamine and zinc lotion, or the oxide of zinc with almond emulsion. Ointments, owing to their facility of application, are also useful, especially in subacute and chronic cases. The best salve for the purpose is the modified diachylon, which should be spread on cloth, and neatly applied to the affected parts. In the very persistent eczema found behind the ears of children a brisk application of green soap, followed by unguentum vaselini plumbicum, is especially useful. For relief of the itching a carbolic acid lotion (℞. Acid. carbolici, ʒij; glycerini, ʒss; alcoholis, ʒviijss. M.) may be frequently mopped on. My friend, Prof. H. N. Spencer, M.D., has kindly prepared for me the following brief statement of the treatment he has in his large experience found most useful in the management of eczema of the auditory canal:

The local treatment should consist in soothing applications in the acute form, whereas in the chronic form of eczema the treatment requires to be stimulating. Water should be abrogated in both forms. Accumulation in the canal, of whatever character it may be, is best removed by means of the absorbent cotton mop, or the curette, and angular forceps—providing always that the operator possesses the necessary patience and skill. Ointments as a rule constitute the most useful means of medication. Instead of being spread upon cloths which are difficult of application the ointment may be retained by means of plugs of absorbent cotton.

In acute eczema an oxide of zinc ointment compounded with cold cream—gr. lx, ʒj—is a valuable remedy; also



the diachylon ointment of Hebra. The moist or exudative form of the disease involving the inner third of the canal, and, where the drumhead has become implicated, will often yield to a concentrated solution of nitrate of silver applied by the cotton holder. If the desired result is not obtained promptly, however, this application should be discontinued, and an insufflation of boric powder will sometimes succeed where the silver has failed.

In chronic desquamative eczema an alcoholic solution of resorcin rubbed firmly in the part, and the oleum rusci have proved valuable remedies.

The advantages of constitutional treatment has not been apparent except in the case of anæmic and scrofulous subjects where the iron preparations and cod-liver oil—especially in children—are indicated.

Seborrhœal eczemas of the cartilaginous meatus are more prevalent than eczemas of the true inflammatory type. These yield readily to an inunction of aristol and sulphur.

#### **Eczema of the Nares.**

The disease here is often associated with chronic catarrh, and in children frequently follows in the wake of the exanthemata. It is to be distinguished from lupus and syphilis. The nose is often swollen and the nasal orifices almost closed with crusts. On removing the crusts the mucous membrane will be found reddened and congested, and sometimes the seat of considerable ulceration. A follicular eczema of the hairs within the nares is not uncommon in the adult, and is very persistent, and gives rise to much suffering. Pustular eczema of the upper lip, in connection with eczema narium, is quite frequent. These cases require that the general health receive proper attention. Cod-liver oil and syrup of the iodide of iron are serviceable in children; and as the follicular eczema of adults generally indicates debility, it must be treated accordingly. Locally, crusts should be removed by free inunction of olive oil, and subsequently a soothing and slightly astringent ointment applied (℞. Glycerol, plumbi



subacetatis, ʒj; ung. aq. rosæ, ʒj. M.). Unna recommends inserting into the nostrils small rolls of paper covered outside with zinc and red precipitate salve mull. Diachylon salve mulls or diachylon ointment spread on muslin is a good application for eczema of the upper lip.

### Eczema of the Lips.

The mucous surface of the lips is sometimes the seat of eczema. One or both lips may be affected and take on any of the forms of the disease, the exuding and squamous varieties being the most frequent. Hebra states that eczema of the lips is often associated with eczema of the anus. Many people suffer in winter from painful chapping of the lips.

As already stated, the cutaneous portion of the upper lip, both in the child and in the adult, is often the seat of pustular eczema, and when the upper lip is covered with a mustache, the affection is particularly obstinate.

The local treatment of the disease when it occupies the vermilion part of the lip is highly unsatisfactory. When acute, a soothing preparation like lanoline with twenty per cent. cold cream may be tried; the oxide of zinc and almond emulsion (℞. Zincæ oxidī, ʒss; mucilag. acaciæ, ʒj; emuls. amygdalæ, ʒij: aquæ rosæ, q. s. ad ʒiv. M.) frequently applied is very agreeable. In squamous cases G. H. Fox recommends five grains of thymol to the ounce of cold cream. When there is much thickening solutions of caustic potash, twenty grains to the ounce, may be employed. Van Harlingen speaks well of a mixture of dilute phosphoric acid (℞. Acid. phosphoric. dil., glycerini, syrupi, āā ʒss.) which should be applied three times a day. Shoemaker's method of immobilizing the lips with adhesive strips or medicated plasters—I employ the diachylon plaster mull—is an excellent one. Deep cracks may be healed by rapidly pressing into them a sharpened stick of nitrate of silver, and afterwards painting the parts with the compound tincture of benzoin.

In pustular eczema of the upper lip it is important to



treat any nasal discharge that may exist, and in the adult the hairs should be epilated. The best local application in the acute stage is the diachylon ointment spread on muslin, or the diachylon salve mull. In more chronic conditions Rosenthal's paste acts very well (℞. *Acidi tannici*, ʒj; *sulphur. præcip.*, ʒij; *zinci oxidi*, pulv. amyli, āā gr. cl; *vaselini*, gr. clx. M.). This should be smeared on thinly twice a day. When the infiltration is considerable it will be found necessary to exert pressure by means of a bandage, and to do this effectually a thin wedge of cork should be worn between the lip and teeth.

### Eczema of the Lids.

Erythematous eczema of the lids is common, especially in connection with the same condition on the face generally. Eczema of the edges of the lids is particularly to be noted in strumous children, and may be associated with chronic conjunctivitis. It is really a pustular eczema, and usually presents all the symptoms of that disease. In the great majority of cases this eczema tarsi is associated with seborrhœa of the scalp, and is probably due to infection from that region. Many cases of stytes have undoubtedly the same etiology. The most soothing applications are demanded for the erythematous eczema of the general surfaces of the lids, even if there be in addition considerable thickening, as irritating remedies are but poorly tolerated. Equal parts of cold cream and zinc salve will be found useful. Jamieson has recently recommended a very acceptable ophthalmic salve (℞. *Olei amygdal. dulcis*, aquæ, āā ʒss; *lanolini*, ʒiij. M.). For the disease at the edge of the lids epilation is often demanded, although mercurial preparations, and especially the yellow oxide (℞. *Hydrarg. oxidi flav.*, grs. ij–viij; *vaselini*, ʒj. M.) act exceedingly well, and may render epilation unnecessary. Often this latter state is kept up by some ocular defect, and may be cured by the adjustment of proper glasses. In all cases the condition of the scalp should be looked into, and if marked seborrhœa is discovered that disorder should be



removed by appropriate treatment. In strumous children cod-liver oil and iron are urgently demanded, particularly as the trouble often follows an attack of one of the eruptive fevers.

#### **Eczema of the Beard.**

The symptoms are similar to those observed in eczema of the scalp, the elementary forms being of the vesicular, erythematous, papular or pustular type. Most of the cases, however, are pustular or squamous in character. The disease may involve limited regions only, or attack the whole beard, and even the eyebrows and eyelashes may be affected. The eczema, moreover, may extend from the hairy parts, wherein it differs from sycosis, and attack the adjacent non-hairy parts of the face and neck. Pustular eczema of the beard may be either acute or chronic. In acute cases the parts are hot, swollen and tender, and upon the congested skin small pustules, which are situated between the hairs and at the mouths of the follicles, appear in great numbers. These soon burst, mat the hairs together and form yellowish or greenish colored crusts that are very adherent. When the disorder has become chronic the hairs are somewhat thinned, and removal of the crusts reveals a reddened, exuding surface, which is generally smooth and not tuberculated as in sycosis, although when the disease is long-continued the hair follicles may become involved. Squamous eczema, which may follow in the train of any of the other varieties, is apt to be obstinate, and is found usually in more or less circumscribed patches, and is attended by a greater amount of pruritus. Eczema of the beard is to be distinguished from ringworm, acne, the tubercular syphilide, epithelioma and sycosis. In very acute pustular cases it will suffice to clip the beard closely, and apply soothing applications such as salicylated or carbolized oil, equal parts of olive oil and lime water, black wash, cold cream, lanoline, etc. After the more inflammatory symptoms have subsided frequent shaving is imperative, although the patient and the patient's barber will both declare it to be impossible. However, it can be done,



and should be done, at least every second day, and immediately afterward the modified diachylon salve, spread evenly on muslin, should be applied, freshly prepared cloths being reapplied morning and evening. When the disease is decidedly chronic more active measures still will be appropriate. In addition to the shaving, it is well to first epilate such hairs as are manifestly imbedded in pustules, and afterwards to have recourse to stimulating salves and pastes. Under such circumstances Robinson's ointment (℞. Ung. diachylon, ung. zinci oxidi, āā ʒss; ung. hydrarg. ammon., ʒiij; bismuthi subnit., ʒjss. M.), or (℞. Sulphuris præcip., ʒj; ung. aq. rosæ, ʒj. M.) serves a good purpose, as does also Lassar's paste. For squamous eczema tar ointments (℞. Olei rusci, ʒj; ung. aq. rosæ, ʒj. M.) are required, and the shaving should be regularly kept up. Rosenthal's paste, the formula of which is given under pustular eczema of lip, is admirably adapted for chronic cases. There is great tendency to relapse in all forms of the disease, and it is, therefore, important to persevere with the treatment in a modified way for many months. A dusting powder of the oleate of zinc is very useful as a protective during the day after the necessity of employing the more active measures has passed away.

### **Eczema of the Breast and Nipple.**

The disease when occurring on the breasts should be distinguished from Paget's Disease (q. v.), and from scabies. It is most common in nursing women, but it is also to be seen, although rarely, in virgins, and even in males. The mildest form is the "sore nipple," which consists of a superficial denudation of epithelium with some slight discharge, and when the parts are at rest, of the formation of crusts. In severe cases the nipple is raw, swollen and deeply fissured; or it may be sunken, and the surrounding areola heavily incrustated. The eruption is generally arranged in a circle around the nipple, and may extend so as to involve the whole breast. One or both nipples may be attacked. Mastitis is not an in-



frequent sequela. For the fissured nipples of nursing women Veiel recommends borax ointment prepared after Lister's formula. The nipple is washed off after nursing with borax water (1:25), and then covered with the borax salve spread on muslin. For the acute form of the disease the modified diachylon ointment answers well, or Unna's paste (R. Sacchari albi, zinci oxidi, mucilag. acaciæ, glycerini, āā ʒj.) may be applied after the parts have been gently dried.

Nipple shields are of advantage. In women who are not nursing the green soap and diachylon ointment treatment is of the greatest value. Liveing has had good success with a solution of nitrate of silver brushed over the surface. I prefer the solution made with the spirit of nitrous ether (grs. xvj-ʒj).

#### **Eczema of the Umbilicus.**

In this situation the disease presents itself usually as an *eczema rubrum*. The navel is red and swollen, generally more or less crusted, and the exudation is quite offensive. Sometimes the skin around the umbilicus is also involved in the inflammation. Syphilis should be excluded. Umbilical *eczema* is not always easy to cure. Duhring suggests an ointment of oleate of zinc, a drachm to the ounce, with fifteen or thirty grains of calomel. Boracic acid salve, used as in *eczema* of the nipple, is also valuable. Diachylon ointment spread on muslin, or the diachylon salve mull, is useful.

#### **Eczema of the Flexor Surfaces of the Joints.**

This is a quite common seat of the affection, wherein it differs from psoriasis, which is always to be seen on the extensor surfaces. It is usually symmetrical, and is apt to assume the aspect of an *eczema intertrigo*, although the skin may become much infiltrated, fissured and covered with scales. In the acute stage Lassar's paste is very efficient; in subacute conditions the tar and zinc salve may be employed to advantage; but when the disease has



become chronic more decided stimulation is demanded, such as by tar or frictions with green soap.

### **Eczema Intertrigo.**

This occurs between the gluteal folds, in the axillæ and groins, under the breasts of women, and in fact wherever folds of skin come in close contact. It often begins as a simple erythema (erythema intertrigo) that has been allowed to go on without treatment, but according to Tilbury Fox is to be distinguished from that affection by the nature of the discharge, which possesses the property of stiffening linen. As a prophylactic, stout people especially should keep the parts freely dusted with some bland powder. After the disease has been established, the affected surfaces should be washed as little as possible, and they should be kept apart by the interposition of lint or a thin layer of absorbent cotton. Dusting powders (R. Thymol., gr. j; pulv. zinci oleatis, ʒj. M.), or (R. Pulv. sem. lycopodii, ʒij; zinci oxidi, ʒvj. M.) are generally of advantage. Lassar's paste is of especial value; in other instances a boracic acid salve (ʒj-ʒj), and salicylic acid ointment (gr. xv-ʒj) may be tried.<sup>1</sup>

### **Eczema of the Anus and Perineum.**

Eczema in this region often has an insidious beginning, and but rarely shows itself in the acute form. The anus alone may be the seat of the disease, or the perineum and genital organs may be simultaneously involved. Often the muco-cutaneous folds are congested, slightly thickened, and with or without fissures. In most instances there is a free and very offensive discharge. In other cases the parts are red, greatly thickened, and the seat of painful cracks, and the eczema extends up the mucous membrane of the anus. One of the most painful manifestations of the disease is the implication of the raphé in the process. Intolerable pruritus, which is worse at night, is the chief thing complained of, although pain, the result of the

<sup>1</sup> See also under "Erythema."



fissures, and also due to the rawness left from scratching, is a prominent factor in the unexaggerated misery from which these patients suffer. Many of these cases are complicated with hæmorrhoids, which are often undoubtedly the principal etiological factors in the production of the eczema.

The treatment should be internal and local. The diet should be regulated, smoking interdicted, and a regular action of the bowels maintained. For this latter purpose, in this condition, Bulkley recommends one or two teaspoonfuls of the cream of tartar and sulphur (R. Sulphuris præcipitati, potassii bitartratis, āā ʒj. M.) given at night, mixed with a little water. I have found it excellent. The same writer's method of employing hot water locally is of great value, since nothing relieves the itching so speedily. Before commencing the applications the salve that is to be worn in the intervals is first spread on lint and made ready for use. I generally order for this purpose equal parts of the pitch ointment and cold cream (R. Ung. picis, liq., ung. aquæ rosæ, āā ʒj. M.). The patient is then directed to place between his feet a basin containing very hot water, into which he dips a soft handkerchief that is immediately withdrawn and pressed in a mass against the affected surfaces for about one minute. Three or four minutes altogether are sufficient, and immediately afterwards the parts are softly dried, and without loss of time the ointment put on. One drachm of calomel to the ounce of vaseline is also serviceable. In combination with this latter Liveing praises a bismuth ointment with morphia (R. Bismuthi nitratis, ʒij; morphiæ hydrochloratis, gr. ij; ung. aquæ rosæ, ʒj. M.). The nitrate of silver solution (R. Argenti nitratis, gr. xv.; spiritus ætheris nitrosi, ʒj. M.) painted over the eruption will also subdue the itching. Lassar's paste, when properly made, is a good application, and also a bismuth preparation with carbolic acid (R. Bismuthi subnit., ʒss; zinci oxidi, ʒj; pulv. amyli, ʒij; acid carbolicum, ℥ x-xv; vaselini, ʒj. M.).



### Eczema of the Genitals.

Eczema of the penis is not very common. It usually assumes the erythematous form, which may attack one or another part of the organ, and especially the portion lying against the scrotum ; occasionally, however, the whole penis is involved in the inflammation, and becomes enormously increased in length and breadth. In a chronic case recently under my care an elephantiasis of the prepuce had been produced, and it was found necessary to amputate the redundant tissues. Moist eczema of the scrotum is very frequent ; there is much swelling, and a most offensive gummy secretion is constantly being poured out. Chronic erythematous and squamous eczema is often to be seen in these parts, and is exceedingly rebellious to treatment. In these latter cases the skin is profoundly infiltrated and the natural furrows are exaggerated. Hard nodules, that subsequently suppurate, are also to be observed in connection with eczema in this region and cause no little annoyance.

Vesicular eczema that soon becomes an eczema rubrum, which is attended by much swelling, is prone to attack the labia majora in women. However, all grades of the disease may occur on the female genitalia, and the eruption may extend into the vagina. Eczema of the genitals in both sexes may be strictly limited, or else it may spread to the mons veneris and to the abdomen and thighs. In all obstinate eczemas of these parts it is well to examine the urine for sugar, and to seek for a possible causation in the presence of pediculi, and also to ascertain if a leucorrhœa has any influence in maintaining the disease. In acute eczema of the penis and scrotum soothing measures are demanded, such as the calamine and zinc lotion, and the oxide of zinc emulsion with almond oil. Eczema of the prepuce is best treated with Lassar's paste. Subacute eczema of the scrotum and labia do well under the tar and zinc salve, and if the itching is very severe Bulkley's method with hot water is valuable.

Diachylon ointment and the diachylon-lanoline mull is



sometimes better borne than even the mildest preparations of tar. These various dressings should be kept in position by a suspensory—preferably Unna's—in men, and by a T-bandage in women. In the infiltrated, chronic type of the disease Veiel recommends an ointment of tar diachylon (1:20) which may be gradually increased to 1:2. In women, the nitrate of silver solution (gr. xvj: ʒj) is often of benefit. Hebra was in the habit of applying a poultice of green soap to infiltrated scrotal eczema, but in my experience the inunction of the soap followed by the diachylon ointment is safer.

Another valuable method is to rub the scrotum with a solution of salicylic acid in alcohol (ʒj: ʒiv), and then to apply, spread on muslin, a salve of boracic acid or the ordinary diachylon ointment. The urine should be examined for sugar in every case of genital eczema, since glycosuria is a common exciting cause of the disease.

### **Eczema of the Hands and Feet.**

Eczema of the hands and feet is common. The disease is sometimes limited to one hand or foot, or to the hands or the feet alone, or it involves all four members at the same time.

Eczema of the hands is much more frequent than that of the feet, since the former are more exposed to the various irritants, such as water, lime, chemicals, sugar, flour, etc., that will so readily evoke the disorder in the predisposed subject. Acute vesicular eczema not infrequently attacks the hands; it may be limited to the backs, or the whole surface—both palms and backs—may be implicated. When the palmar surface is involved, owing to the thickness of the epidermis, the vesicles do not burst readily, but will burrow for a long distance before rupturing. The backs of the hands may also be the seat of various types of papular and scaling eczema and well-marked eczema rubrum; or the disease may be limited to the sides of one or more fingers, or to the interdigital spaces.

All degrees of the dry scaling eczema, aptly called ec-



*eczema rimosum*, may be found on the hands and feet. Sometimes the condition is merely one of excessive dryness and moderate infiltration of the whole palmar or plantar surfaces; at other times there are tolerably well-defined fissured and thickened patches occupying the center of the hand, or else most pronounced over the thenar and hypothenar eminences; or again, the palms and soles may be affected to such a degree that the hands can not even be flexed, and walking is almost impossible. The same condition is often found confined to the tips of the fingers, and is due to the same general and special influences that give rise to the disease on the palm. Careful observation will show that this *eczema fendillé* is not preceded by any appreciable redness, but that small areas of skin, particularly at the ends and sides of the fingers, become infiltrated, sometimes with a central depression, and, after a variable period, crack open.

In all of these cases, owing to the anatomical arrangement of the parts, and to the inelasticity of the infiltrated skin, very painful cracks and fissures soon form. Itching may be present, but it is not so violent as in *eczema* of other types.

In addition to the *eczema rimosum* of the soles, the disease may occur on the dorsum in any of its forms. Papular and erythematous *eczema* of the instep and ankles is common and very troublesome, as is also a sort of *eczema intertrigo* between the toes.

Nothing succeeds so well in acute vesicular *eczema* of the hands as the familiar calamine and zinc lotion, but it must be applied by means of strips of cheese cloth, which are to be kept in place by bandages and renewed frequently. For the rough and scaly condition of the skin that follows the attack the parts should be anointed with lanoline and cold cream in equal parts. *Eczema* of the backs of the hands and feet should be treated according to the necessities of the case by the tar and zinc salve, by the white precipitate (gr. xxx: ʒj), or in *eczema rubrum* by soaping and the diachylon ointment. Unna's diachylon



salve mull, and in more chronic cases the diachylon plaster mull, make most elegant and convenient dressing for the fingers especially. Where there is much thickening, the compound salicylated soap plaster is effectual. In the infiltrated eczema of the palms and soles it is necessary to get rid of the thickened epidermis. Salicylic acid answers admirably for this purpose. I prefer to use it in the form of Unna's plaster mull, but if this is not obtainable the acid may be prescribed in traumaticine (℞. *Acidi salicylici*, gr. xxx; *traumaticini*, ʒss. M.). An equal amount of chrysarobin may be added to this pigment. The compound salicylated soap plaster containing ten per cent. of salicylic acid may also be employed for the same purpose. This treatment is much more effectual than the methods with caustic potash, glacial acetic acid, rubber gloves, etc., that were formerly prescribed. The preparation known as "Emol Kelect," a natural product similar to Fuller's earth, has marked softening properties, and has been recommended in the following formula (℞. *Emol Kelect*, ʒij; *zinci oxidi*, ʒj; *glycerin. plumbi subacetat.*, q. s.; *lanolini*, ʒss; *vaselini*, ʒss. M.). Use sufficient glycerine of subacetate of lead to convert the powders into a paste; then mix with the vaseline and lanoline. Apply at night and cover the hands with lint. After the thickened epidermis has been removed a tar ointment (℞. *Olei rusci*, ʒj; *ung. aquæ rosæ*, ʒj. M.) should be rubbed into the patches twice a day.

Eczema of the feet in its manifold expressions should be treated upon the same general principles. When the disease occurs between the toes, powders (℞. *Thymol.*, gr. j; *pulv. zinci oleatis*, ʒj. M.) or pastes, especially in the form of Lassar's or Ihle's, do better than ointments. In obstinate cases painting occasionally with the solution of nitrate of silver (gr. xvj: ʒj) is beneficial. In all forms of eczema of the hands and feet freedom of the parts from irritating influences of every sort is of essential importance. Many eczemas of the hands are due to the callings of the individual, *e. g.*, plasterers, bar-keepers,



washerwomen, chemists, surgeons, etc., and to effect a cure it is necessary that the exciting cause or causes should be either temporarily or permanently withdrawn.

### **Eczema of the Nails.**

The nails are sometimes attacked by eczema, but although the disease may affect one or more of them without being present elsewhere, the hands are, as a rule, similarly involved in the disorder. The nail is often rough and uneven and is deprived of its normal lustre, and it may be depressed at the root, and marked with lines and furrows. In some cases the skin around the sides and base of the nail is thickened, red and very itchy, or the nail itself may be affected, becoming rough, lustreless, marked with lines and furrows, and exceedingly brittle. In a case at present under my care the nails are clubbed, deeply lined, and the subungual portion of the epidermis is so hypertrophied that the nails are lifted from their beds for a considerable distance. For months or even years after an eczema has been recovered from the nails will remain brittle and chalky, and absolutely symmetrical markings will remain as permanent disfigurements. Arsenic given internally in moderate doses and over long periods is of undoubted value in chronic nutritive disorders of the nails. Locally, Shoemaker recommends an ointment of tin oleate. For the condition called by H. Hebra hyperkeratosis subungualis salicylic acid made into a paste with vaseline, and kept in position by a diachylon plaster mull is of benefit. In Hebra's case the nail was clipped as short as possible, local anæsthesia produced, and the hypertrophied tissue destroyed with Paquelin's thermocautery.

### **Eczema of the Legs.**

The disease in this situation is rare in children, occurring mostly in advanced life, and in persons who are obliged to be constantly on their feet. All types of eczema may be observed on the legs, the most striking and



common form being *eczema rubrum*. When fully developed an *eczema rubrum* of the legs presents a clinical picture not readily forgotten.

The disease may develop in separate patches that remain single, or else small areas of eczematous skin may coalesce to form one large patch that generally occupies the anterior surface of the leg. The inflammation may be limited by the ankle below and the knee above, which is usual, or it may travel down on the foot and spread some distance up the thigh. When first seen by the physician the disease is generally chronic, and, if it has not been poulticed or otherwise treated, exhibits a surface more or less covered with yellowish, brownish or blackish crusts, and in between them a deep red, raw-looking and exuding skin, and here and there evidences of severe scratching. Sometimes the legs are of a purplish red, tense and shining, but without scales or crusts. Varicose veins and varicose ulcers are the common accompaniments of this condition, and the dilated and tortuous vessels may be regarded as the exciting cause of the *eczema*. Infiltration, exudation and severe itching are pronounced symptoms, and often in the varicose condition there is much complaint of pain of a deep, boring character, as if the leg would burst. Various hypertrophic changes follow in the wake of long continued *eczema* of the lower limbs. Marked and enduring pigmentation is usual after healing. I have met with two cases of what may be called *eczema exfoliativum* occurring on the front of the leg. Both patients were men in middle life and suffered from ordinary forms of the disease elsewhere. The parts affected—a space of about five inches in length and running half way around the leg on both sides—were covered with shriveled-looking and chequered epidermis, which could be readily rubbed off with the finger, and whose removal left to view a shiny, red, slightly moist surface. In a short time the epidermis would be regenerated, but as before would possess no power of adhesion. A tendency to recovery was first shown by the fact that the skin could not be pushed off



with the finger, but that some forcible peeling of it was necessary. Itching was marked in these cases.

The treatment of the ordinary forms of eczema as seen upon the legs should be carried out on the principles of management already mentioned. The treatment of eczema rubrum and the varicose condition will require especial consideration. In my experience, and after a full trial of many other methods, I have found Hebra's treatment by green soap and diachylon the most efficacious. The following directions should be closely followed: In the first place, before beginning the soaping, the lead salve should be evenly spread on strips of muslin and put aside in a convenient place; the next step is to dip a piece of flannel into lukewarm water, and, having wrung it nearly dry, to smear on it a piece of the green soap of the size of a hickory nut. The soap should now be firmly rubbed into the affected parts for a few minutes, and when this has been accomplished, the flannel should be dipped into the water again, and while still wet briskly rubbed over the surface once more. As soon as this process has been concluded, the lather should be washed off, the skin gently dried, and the prepared muslin evenly and neatly applied, and the dressing kept in place with a roller bandage. According to circumstances, the soap frictions may last from five to twenty minutes, and be repeated once or twice a day. After the first rubbings the skin will look very angry, but after a time the itching diminishes, the infiltration disappears, and the surface gradually assumes its normal appearance. In other cases, especially when the exudation and crusting is moderate, the glycerine jelly is a good application. The formula given on a preceding page may be employed, or the preparation suggested by Morrow, which is made after the following manner: Add 250 parts of glycerine to 1,000 of gelatine and 2,000 of water, and with this combine 10 per cent. zinc oxide and 1 per cent. carbolic acid. Duhring and Van Harlingen speak well of Squire's glycerole of the subacetate of lead of the strength of fifteen to thirty grains to the ounce of glycer-



ine. Strips of linen are soaked in this preparation, which after being applied to the limbs are covered with wax-paper, and over this a bandage. The dressing should be freshly put on once or twice daily. Unna's paste (R. Kaolin., ol. lini, āā 5vj; zinci oxidi, liq. plumbi subacetatis, āā 5ss. M.) put on with a brush, and kept in place with a bandage, is also useful. The Martin's rubber bandage is particularly valuable when there are varicose vessels and eczematous ulcers, but I think it is a great mistake to apply it directly to the skin. On the contrary, the leg should be first powdered with oxide of zinc, lycopodium or starch, a large stocking drawn on, and the rubber bandage applied over all. The bandage should be put on before getting out of bed in the morning, and removed only upon assuming the horizontal posture at night. The ulcer itself should be powdered with iodoform or aristol, and the inflamed margin covered with diachylon ointment, Lassar's paste or the glycerine jelly. So soon as the ulcer has reached the level of the surrounding skin the iodoform must be discontinued, and the ulcer covered with a simple salve. As a prophylactic measure the elastic bandage must be constantly worn, even after a cure has been effected. The exfoliating eczema just referred to does not stand ointments at all, and must be treated with lotions or some form of paste.

#### Universal Eczema.

The disease does not often cover the whole body, there generally being, even in the cases where large surfaces are affected, some uninvolved areas of skin. I have seen, however, the whole integument, from crown to sole, suffering from an eczema rubrum. Any type of the disease may become universal, or else one part of the body may exhibit one form, while another part shows still another, or several types may coexist. The different varieties of generalized dermatitis should be carefully distinguished from eczema universale. A somewhat disseminated, although not quite universal, form of the disease, that I have seen much of in



elderly people, consists of an eruption of closely set papules about the forehead, cheeks, back of the neck, arms and thighs. The papules run together, forming infiltrated, scaling and fissured patches that itch intolerably.

Patients suffering from universal eczema, especially the aged, should be put to bed, and such constitutional treatment instituted as the necessities of the case would seem to warrant. The local management will vary according to circumstances, and as regards the predominant type of the disease that presents itself. As a rule powders and lotions serve best. When the eczema is moist, and the symptoms are acute, the common carron oil, to which has been added one minim to the ounce of creasote, is a most soothing and agreeable application. The papular eczema mentioned above is exceedingly obstinate and prone to relapse. Relief to the itching may be secured by the free use of carbolic acid in lotion or in the form of a spray. Infiltrated patches may be treated by brushing on a pigment of salicylic acid and chrysarobin (R<sub>x</sub>. Acid. salicylici, gr. xxiv ; chrysarobini, gr. xxiv ; traumaticini, ʒj. M.). Lotions of sulphate of zinc (ʒiv : Oj) grindelia robusta (ʒij : ʒviij) and liq. carbonis detergens (R<sub>x</sub>. Liq. carbonis detergentis, ʒij ; liq. plumbi subacetatis, ʒij ; aquæ rosæ, ʒviij.) are also valuable.

#### **Eczema Infantile.**

Most works on dermatology devote considerable space to a special consideration of eczema as it occurs in infancy and childhood, but as the disease varies but little in its clinical expressions at any age, and as I have endeavored to point out such divergences as do exist in the sections foregoing, I shall content myself with making a few practical statements. In the first place as regards prophylaxis. Many mothers in their eagerness to remove the sebaceous secretions from the scalps of young children use harsh measures, such as combing, scrubbing, etc., for the purpose, with the result very frequently of setting up an eczema that may extend down on the face, and prove very rebellious to treatment. This condition generally rights



itself ; or in obstinate cases disappearance of the unsightly secretion may be expedited by inunctions with sweet oil or vaseline.

In the second place, more particularly it is true in dispensary practice, very young infants are allowed to eat everything that is going, and besides to drink tea, coffee and beer. This, of course, must be stopped and the child put upon food suitable to its age. The irritation of teething undoubtedly has effect in evoking an eczema, as indeed do other irritants and irritating agencies, but the comfortable assurance often given by physicians that the eczema will surely disappear when dentition has been completed is not borne out by experience. Fox and others call attention to the fact that adherent prepuce often by reflex irritation is responsible for eczemas in children. The great lesson to learn in all eczemas, and in eczema at all ages, is that when the disease goes untreated it not only does not tend to get well, but that something closely akin to an infectious process exists, and that a localized patch may at any time be the focus from which an extension of the disorder may be expected. Infants and children should be bathed with bland soaps, and the excretions in very young children should receive special attention, and opposed surfaces should be kept dry and well powdered. It is probably a fact that spoon-fed infants are more susceptible of eczema than those nursed by their mothers, since they are prone to indigestions, but it must be remembered that this is only one of many possible causes of the affection. There is no special internal treatment for infantile eczema, that is, from the standpoint of the dermatologist. I may say, in a general way, that iron and cod-liver oil are very valuable in suitable cases. The local treatment I have already sufficiently outlined. I may here repeat the caution that eczema, especially and, above all, infantile eczema, must not be washed.<sup>1</sup>

<sup>1</sup> Unna divides the eczema of children into (1) a nervous eczema of dentition, (2) a tuberculous eczema and (3) a seborrhoeal eczema. In his own words, a localization in the neighborhood of the eyes, nose,



**PROGNOSIS.** The prognosis of eczema as regards the cure of the existing eruption is generally good. Like all other catarrhal affections, the disease is apt to relapse whenever the exciting cause or causes come into operation. It is, therefore, essential in making a prognosis either as to the duration of a present manifestation of the disorder, or the possibilities of a relapse, to take very fully into consideration the actual condition of the patient at the time, and also his constitutional tendencies. The stage of the disease and its location must also necessarily enter into the forecast. An acute eczema, if promptly and properly treated, is manageable enough, but if allowed to become chronic, with the consequent more or less profound tissue changes, the greater will be the difficulty of securing relief. For anatomical reasons, an eczema on the hands and feet is not easy to manage, especially if, in addition to the difficulty of keeping the parts at rest, the patient should follow a calling, such as bricklayer, washerwoman, etc., where the exciting cause is always in operation. Then, in some situations, such as on the face, the subject of the disease is not always willing to apply the prescribed remedies during the day, thereby losing much time, and in reality undoing in

mouth or ears, complicated with phlyctenular keratitis, scrofulous rhinitis, otorrhœa, or a large vesicular type of eczema, with œdema, and generalized swelling of the glands with little itching, characterizes the tuberculous eczema, and permits of a prognosis of lupus and tuberculosis; but if these regions are free, so that the eczema surrounds the face like a mask cut out in the middle, we have to deal with an eczema of dentition or a seborrhœal eczema. The first appears upon sound skin, usually the middle of the cheeks, then on the forehead, in quite a symmetrical manner, and almost always at the same time upon the radial side of the backs of both hands and upon the wrists. Itchiness is pronounced. This form, he states, is due to reflex irritation, and comes and goes rapidly, disappearing often on the eruption of a few teeth. Except for its symmetry and its repeated recurrences, it is said to resemble herpes zoster. In seborrhœal eczema, on the other hand, the skin was not previously quite healthy, and extensive seborrhœa of the scalp is present after birth. This often spreads over the ears, forehead and cheeks, after it has taken on a moist character, and without attacking the neighborhood of the eyes, jumps over to the eyelashes. It spreads also upon the shoulders and upper arm in the form of dry, scaly or fatty plaques. This eczema maintains its fatty character in all regions, even in moist situations.



one half the twenty-four hours what had been accomplished in the other. One must also take into consideration the age, habits and social condition of the eczematous patient. In my experience eczema is more curable in the young than in the old, in people of temperate habits than in those who indulge in excesses of any sort, and, as in all other diseases, the ability of the patient to obtain proper food, good hygienic surroundings, etc., must, as a matter of course, influence the progress of the disease.

### ECZEMA SEBORRHOICUM.<sup>1</sup>

According to Unna, eczema is often distinguished by a richness of fat in its products and a yellowish color of the rest of the skin due to fat. Under the head of seborrhœal eczema he would place seborrhœa sicca, the seborrhœa corporis of Duhring, lichen circinatus, and perhaps pityriasis rosea, and many cases of psoriasis. Elliot, while agreeing in the main with Unna's conception of the disorder, objects to the name eczema in connection with it, and affirms that although it is a form of cutaneous catarrh, caused by micro-organisms, it differs clinically in its symptomatology from eczema, and prefers Crocker's designation of dermatitis seborrhoica. It is more than likely, however, that for a part at least of the morbid processes inclusively called seborrhœal eczema this name will retain a permanent position in dermatological nomenclature.<sup>2</sup>

According to Unna the point of departure for nearly all cases of seborrhœal eczema is the scalp; less often at the margin of the eyelids, the axillæ or the cruro-scrotal fold. It may remain localized on the scalp for years or spread to

<sup>1</sup>At present this subject is involved in considerable confusion, both pathologically and clinically, but whatever view may be taken of the so-called seborrhœal eczema, the fact remains that the various conditions that make up the clinical picture expressed under that name should be fully recognized from the practical standpoint. A certain amount of repetition in description is unavoidable. See especially Unna, Jour. Cutan. and Genito-urin. Dis., Dec., 1887, and his Histopathology of Dis. of the Skin; also Elliot in Morrow's System, p. 273.

<sup>2</sup>The clinical descriptions of Unna and Elliot, somewhat abridged, are closely followed in this article.



contiguous parts, such as the ears, forehead, temples and neck. The sternal, interscapular and umbilical regions are also favorite sites; sometimes the disease may be observed on portions of the body, as the legs, for example, distant from the scalp, the intervening skin being unaffected; or again the whole body may be invaded (*pityriasis rubra seborrhoica*).

The evolution of the disorder may be slow, indeed it may remain confined to a single locality, or there may occur acute outbreaks involving large surfaces. The lesions may be few in number and discrete in arrangement, or they may increase and coalesce to produce patches of various sizes and shapes. The lesional features of the affection present certain variations. The mildest expression is a diffuse scaliness occurring in more or less extensive areas, the skin remaining of a natural color or a little reddened with perhaps a yellowish tinge. The scales may be large and numerous, forming thick, adherent masses simulating the desquamation of psoriasis; but if there is a complicating seborrhœa oleosa the scales are greasy, the follicular apertures are patulous and the skin more or less congested. The disease is also characterized by sharply defined superficial, solid, round or oval, yellow, pink or yellowish-red macules of various sizes; or there may exist small papules which increase peripherally, or by running together form disk-like lesions, or, again, by a process of peripheral extension and corresponding involution of the central part, various segmented, gyrate or flower-leaved efflorescences are developed. The scaling, or squamous, form of the disorder is the most frequent, crusting and moist forms being less common. The ordinary vesicles and pustules of eczema are not observed except secondarily, and itching is by no means marked.

On the scalp the vertex is the usual seat of the disorder, although the affection may involve the whole hairy region. There is often present a more or less profuse, furfuraceous scaling of a slate-gray color, the skin being pale and dry (*pityriasis capitis*). In the course of time the hairs be-



come dry and lustreless, and after months or years a certain amount of baldness results (*alopecia pityrodes*). The scaling, however, may be much increased, so as to cause thick adherent masses, which surround the hairs and ensheathe them; or from an increase in the fatty secretion the scales may be softer and more friable; or if the seborrhœa is increased in amount the scalp is covered with soft, yellow crusts, and the hair becomes oily and shiny. Beyond slight itching, when the head is heated, or from an accumulation of dirt, the subjective symptoms are not especially marked. Here and there over the scalp a generalized or patchy redness may develop, or reddish-yellow, sharply limited, round or oval, crusted or moist lesions may appear, sometimes extending to the temporal and parietal regions, and even to the ears and parts of the face.

Along the border of the hair of the forehead and neck it is not uncommon to observe a red band covered with scales or crusts (*corona seborrhoica*). At times, usually from some traumatism, an acute dermatitis may be set up presenting the usual symptoms of a weeping eczema and affecting in addition the ears and not infrequently in children the forehead and cheeks. Any of the various forms of the disease may be observed on the ears and parts adjacent. Fissured and crusted patches back of the ears are common, and also scaling and crusting of the external auditory canal. The beard, mustache, the pubic region and other hairy parts of the body may be involved, although rarely, except in the case of the eyebrows, leading to loss of hair. Along the margin of the lids the disorder is frequent, either as a branny desquamation, or in the shape of soft greasy scales surrounding the lashes. According to Elliot, the disease here corresponds to seborrhœa sicca, many eczemas and blepharitis. The association of this affection with chronic "dandruff" of the scalp I have constantly witnessed, and have called the attention of ophthalmologists to it.<sup>1</sup> The authority last quoted says

<sup>1</sup> I have every reason to believe that many styas have the same etiology.



the vermilion border of the lips is sometimes similarly affected. The so-called pityriasis of the face is frequent, and at the sides of the nose the disorder is more frequently seen in an inflammatory form with plugged follicular openings and varicose vessels. The entire nose and various parts of the face may be involved in one or more types of the disease.

The region of the trunk is frequently affected, particularly the sternum and the interscapular space. Here the lesions are to be found in circles or segments of circles, which by peripheral enlargement and subsequent coalescence in time present circinate figures. They begin as small single or grouped papules capped with a scale, and the same lesions may be noted at the extending borders of the larger patches. The general coloration is of a yellowish-red or salmon, but this is somewhat modified according to the successive stages of the evolution of the lesions.

The surface of the patches may be dry and scaly or covered with thin, greasy scales. Round or oval, somewhat elevated spots, slightly scaly or decked with greasy pellicles, are also to be seen in these situations. Itching is not marked. The disease in these situations corresponds to *seborrhœa corporis* and *lichen circumscriptus*.

In the axillæ and groins sharply defined reddish patches, with a tendency to advance in circinate outlines, and not uncommonly exuding, are of frequent occurrence. From these points of origin the eruption may spread to contiguous parts, still displaying the same characteristics, until considerable surfaces are involved.

On the backs and palms of the hands in some instances the patch is ill-defined and the desquamation moderate in degree; in more pronounced types the lesions are more definitely outlined and the scaliness more excessive. It seems to me questionable that the bullous and vesicular lesions and the interdigital excoriations should be properly credited to *seborrhœal eczema*.

Certain eruptions are also described that bear a close resemblance to psoriasis, but differ from it in leaving the elbows and knees free and being covered with fatty scales.



Elliot describes the lesions as papular, round or oval, or nummular disks, or circinate, gyrate or polycyclic bands. They are bright or yellow red, sharply outlined, and frequently show a wrinkled condition of the epidermis along their borders. Sometimes slightly scaly, they may present crusts, the latter being fatty and covering a dry, glistening or moist base. This same condition has been described by Brooke and Wickham and also by Crocker under the name of *seborrhœa psoriasiforme*. I apprehend that certain of these cases at least are examples of true psoriasis complicated by *seborrhœa*, as may happen, according to Unna, in the case of syphilis.

*Seborrhœal eczema* occurs in both sexes and at all ages of life. Among the presumed etiological factors should be mentioned irritation of all sorts, such as uncleanliness, heat, cold, harsh soaps and violent combings and brushings of the hair. Elliot says that people who are much confined indoors, as in the winter season, are peculiarly prone to it. He also regards direct contagion as a probable factor.

It is well known that Unna looks upon the disease as parasitic and has especially described the so-called *morococcus* in connection with it. As will be seen under *alopecia*, Sabouraud claims that all forms of oily *seborrhœa* are of microbial origin, although he states in one place that he exempts from this category certain types of *pityriasis* and *desquamatory* affections, *pityriasis capitis*, however, being one of the many secondary effects. As regards the histopathology of the affection Unna believes the coil-glands to be the source of most of the fatty secretion, besides finding fatty infiltration of the corium and rete. Elliot does not confirm these observations, but at the same time he reports the sebaceous glands as unchanged. Audry reports a case of *seborrhœal eczema* occurring on a scar where both the oil and sweat glands had been destroyed for years. He argues from this that *seborrhœic eczema* is neither a *seborrhœa* nor an *eczema*. Audry also believes that the disease is *auto-inoculable*.

**DIAGNOSIS.** *Seborrhœal eczema* is to be distinguished



from the ordinary forms of the disease by its beginning on the scalp, the absence of marked pruritus, its sharply defined and more or less circinate and crescentic contours, and the fatty character of the scales and crusts. The differentiation from psoriasis has been sufficiently referred to in the description of the dry form.

It is at times difficult accurately to differentiate seborrhœal eczema from pityriasis rosea (*p. maculata et circinata*); but it may be said that the latter disorder does not begin on the scalp, and is usually found on the trunk only, and even there is not especially localized to the sternal and interscapular regions. The lesions of pityriasis rosea lack definition at the borders, and the rings present in their centers a dry appearance instead of being covered, as in seborrhœal eczema, with yellow, fatty scales and crusts.

**TREATMENT.** Unna insists, and I think rightly, upon the care of the scalp in this affection, since it is a matter of clinical experience that the disease may spread thence to other parts of the body.

For washing the scalp in the pityriasic forms of the disease there is nothing better than the shampoo of green soap mentioned in connection with alopecia furfuracea.

Sulphur, resorcin and salicylic acid are the most efficacious drugs in the local treatment. Elliot states that lotions are more useful than salves on hairy parts, and recommends one containing resorcin, three to ten per cent., in equal parts of alcohol and water. On the contrary, it has always seemed to me that in the dry, scaly forms, wherever situated, an ointment served a better purpose.

R.	Resorcini,	℥j.	
	Sulphuris præcipitati,	℥j.	
	Vaselini,	℥j.	M.

R.	Acidi salicylici,	℥j.	
	Sulphuris præcipitati,	℥jss.	
	Vaselini,	℥j.	
	Olei limonis,	q. s.	M.

The acute forms require the usual treatment prescribed in similar cases of eczema. On the hairy scalp a soothing



lotion of equal parts of oil of sweet almonds and lime water, with one per cent. of carbolic acid, should be applied until the acute symptoms abate.

Intertriginous forms should be treated by Lassar's or Ihle's pastes (see eczema). When chronic, infiltrated eruptions are encountered stronger remedies will be demanded, such as chrysarobin, pyrogallol, the tars, etc. In the psoriasiform types, with dry, scaling patches, found at the borders of the hair, white precipitate and tar sometimes succeed where resorcin and sulphur fail.

R.	Hydrarg. ammoniati,	ʒj-ʒss.
	Liq. picis alkal.,	ʒj.
	Vaselini,	ʒj. M.

There is no especial internal treatment for this disease beyond the usual attention to hygiene, and the removal of any complicating disorders.

PROGNOSIS. The prognosis is usually good, but relapses may be expected.

### DERMATITIS REPENS.

Under this name Crocker was the first to describe a form of wandering dermatitis following upon some local injury. Since his first publication quite a number of cases have been described. It usually begins on one of the upper extremities, probably on account of the greater frequency of exposure of those parts. The initial point of departure may have been produced by the most diverse agencies, *e. g.*, a burn, a drop of melted sealing wax, a splinter, etc. The surface is strongly suggestive of eczema rubrum, the skin being red and moist. The advancing border is sharply limited and irregular in outline, while the peripheral extension of the disease is marked by continuous undermining of the epidermis with a serous or purulent exudation. While creeping forward at one point it may heal at another; but the tendency of the affection is towards a continuous advance, often involving considerable surface. Where the process has passed over a



given region the skin has a glistening, red and somewhat thinned appearance. Crocker regards the disorder as a peripheral neuritis starting in some, perhaps, trivial injury, and kept up by a secondary parasitic infection.

The diagnosis from eczema is based upon the appearance of the border of the patch and the mode of extension of the disease, but the absence of itching, usually given as a point of differentiation, is not always to be relied upon, for in a case recently reported by Stowers<sup>1</sup> this symptom, together with constant burning and tingling, was a prominent feature. No internal treatment has been found available, but locally antiseptics, *e. g.*, permanganate of potassium in ten per cent. solution, salicylic acid, iodoform, aristol, etc., have proved of service.

### PRURIGO.

Prurigo is a chronic inflammatory disease of the skin that develops first in childhood, and is characterized by an eruption of pale, discrete papules, and attended by severe pruritus.<sup>2</sup>

Prurigo is a very rare affection in this country. In the course of twenty-eight years' observation in St. Louis I have met but one undoubted case. It is not uncommon on the continent of Europe, and especially in Austria.

The disease begins during infancy, and makes its first appearance in the form of urticarial wheals, which are after a season followed by the papular eruption. The papules are mostly of the size of hemp seeds, and at first are of the color of the skin, and more readily felt than seen, but in the course of time, as a result of the violent itching, they be-

<sup>1</sup> Brit. Jour. Derm., Jan., 1896. Abstract, with illustration, in Gould's Yearbook of Med. and Surg., 1897.

<sup>2</sup> In former years the term prurigo was applied to various forms of skin disease in which itching was a prominent symptom, *e. g.*, pediculosis, the symptomatic itching of eczema of the anus, scrotum, etc. We now by common consent restrict the title prurigo to the papular disorder of the skin described above, and employ the word pruritus to express the subjective state of itching in general, as well as to indicate that condition of the skin in which itching, not dependent upon previous lesions, constitutes the disease proper.



come darker, more appreciable to the eye, and capped with blood or serum crusts. The extensor surfaces of the limbs are the most involved, while the flexor aspects, the face and scalp, palms, soles, penis and scrotum are rarely, if at all, attacked. The ever-present violent itching is the chief symptom of the disease, and according to German writers patients are occasionally driven to insanity or suicide by their sufferings. According to the intensity of the accompanying pruritus, which will depend upon the extent and distribution of the prurigo nodules, the secondary changes in the skin will be more or less pronounced, viz., infiltration, pigmentation, desquamation, the deepening of the normal furrows of the skin, etc.

In very severe types of the affection (*p. ferox*) there is an exaggeration of all these symptoms, *e. g.*, extensive eczema, recurrent urticaria, ecthymatous affections, and the characteristic lymphatic enlargements, especially of the inguinal glands.

Views differ as to the essential nature of prurigo. Some regard it as a neurosis, and others look upon it as inflammatory in origin. Riehl thinks that prurigo should be classed with urticaria, and Mr. Hutchinson says that there is no such disease as prurigo, but that a variety of causes, acting on a predisposed and susceptible skin, may evoke the symptoms to which that name has been given. Professor J. C. White in a valuable paper has shown that the widest divergence of views exist as to every feature of this disease—its symptomatology, its anatomy and its pathology. For himself he accepts the existence of a condition of early childhood, allied to pruritus and urticaria in its visible manifestations, and not to be positively distinguished from them in its first stages, often becoming in certain parts of the world a chronic affection due to some inexplicable national cutaneous traits, or inherent customs of living, a condition which certainly lacks many of the essential elements of individuality.

However this may be, the disease, after it has been established, is sufficiently distinctive in symptoms and



course to warrant a place to itself. Prurigo is not contagious. Males are more frequently affected than females. The disease begins during the first year of life as an urticaria, or papular urticaria, and according to Riehl it is not fully developed in its papular form until the child reaches the third or fourth year. Hebra spoke of the affection as being worse in winter, while Crocker says his cases are better at that time. It is necessary to remark in this connection that the French school recognizes other types of prurigo than the prurigo of Hebra, namely, the "diathetic prurigos" of Besnier, the "prurigo ferox" of Vidal and a "prurigo simplex." Unna also admits a prurigo mitis that differs from Hebra's prurigo and from papular eczema.

**DIAGNOSIS.** In establishing a diagnosis of prurigo it is necessary to view the disease as a whole, namely, the history of the case, the location of the papules and their special features, and to take into consideration the secondary changes in the skin brought about by the violent scratching, the glandular enlargements, etc. Among the diseases that are most liable to be confounded with prurigo are scabies, chronic eczema and pediculosis.

**TREATMENT.** The internal treatment is mainly in the direction of good food, proper hygienic surroundings and the appropriate use of tonic and supporting remedies. Certain internal remedies have been given for their direct effect on the pruritus, such as carbolic acid, bromide of potassium, pilocarpine hypodermically (Pick, Simon), and the tincture of cannabis indica by the mouth (Crocker). The last two remedies have proved the most serviceable. A great variety of local measures have been advocated, *e. g.*, warm and cold baths, sulphur, mercurial, alkaline and tar baths, and the application in the shape of lotion and ointment of preparations of sulphur, tar, naphthol.

The preparations of tar and sulphur may be used in conjunction with baths, and sometimes in bad cases better results are obtained by rubbing the parts with green soap, followed by the bath and the subsequent application of



the selected salve. Pick claims satisfactory results with the glycerine gelatine.

**PROGNOSIS.** Fully established prurigo in the adult, while not admitting of cure, may be much ameliorated. Schwimmer states that he has seen many cases in children cured after several years' treatment.

### PSORIASIS.

Psoriasis is a chronic, inflammatory disease of the skin, characterized by variously sized lesions having red bases, covered with white, mother-of-pearl scales, which affect by preference the extensor surfaces of the body. The affection is apparently more common in Great Britain than in Germany or America. In this country it represents about three per cent. of all cases of skin disease.

The disorder in its earliest expression consists of minute reddish spots or points of congestion, which, practically from the beginning, may be said to show evidence of the characteristic free scaling. The eruption is usually made up of multiple lesions, and these by peripheral extension grow to the diameter of large or small coins. Having attained a certain definite size, the papules may remain discrete; in other instances the lesions coalesce and form in this way patches of variable sizes and shapes, generally with a tendency to a circular arrangement.

Owing to this difference in the size, shape and mode of evolution of the psoriatic lesion, a number of terms have been invented to represent the manifold forms assumed by the disease; for example, when the papules are pin's-head size, it is called psoriasis punctata; when somewhat larger, psoriasis guttata; when of the size of coins, psoriasis nummularis, this being, perhaps, the most frequent variety; when the patches heal in the center, presenting a ring of eruption, it is designated psoriasis circinata or orbicularis; and if these rings touch each other at several points, making wavy bands, figures of eight, etc., it is known as psoriasis gyrata; and, finally, should the eruption occupy extensive tracts of the integument, it is denominated psoriasis



diffusa. Some few other forms have been described, the most interesting of which is the *p. rupioides* of Anderson, wherein the scales are heaped up in an oyster-shell arrangement.

But whatever forms or dimensions the lesions of psoriasis may assume, if studied in detail it will be seen that they have certain definite and determinate features that are rarely absent. They are infiltrated, elevated, sharply defined, have red bases, and are covered with white imbricated, generally easily detachable scales, which upon removal will exhibit a punctate, bleeding surface. According to Bulkley, after the scales have been thoroughly removed, a thin pellicle may be peeled off the surface of the patch. The scaling in psoriasis presents considerable variations. It is not abundant in the active stage of the disease, being scantier in the beginning and in the period of decline, and it is said that the scales are thinner in females than in males; and, moreover, under all circumstances, the thicker the epidermis the more plentiful the scales. The scales have an imbricated arrangement, and are of a glistening white color, which is due, according to E. Wilson, to the presence of air between the dried-up epithelial cells.

The color of the patches, that is, after the removal of the scales, which in the beginning is of a pinkish or rosy hue, becomes later on of a brownish or ham tint, being darker on the lower extremities.

The patches of psoriasis, unlike those of eczema, are sharply defined against the unaffected skin, and the larger lesions are surrounded by a delicate red areola, the scale formation not keeping pace with the extension of the psoriatic process. In the further evolution of the plaques the skin becomes considerably infiltrated, which condition in some situations gives rise to painful cracks and fissures.

The involution of the patches begins in the center, and often in this way various bizarre figures are produced, the disease spreading at the periphery, and merging into adjacent lesions.

The lesions upon their disappearance leave no perma-



ment traces behind, but upon the legs a considerable discoloration may persist for a season.

The eruption is at all times absolutely dry—there is no discharge feature. Itching is often entirely absent, but I have occasionally seen it very severe. In fact, aside from the bodily disfigurement, the patient is rarely made conscious of his affliction.<sup>1</sup>

Psoriasis affects by preference the extensor surfaces of the body, and more particularly the elbows and knees. In my experience the scalp is usually involved, and most patients with psoriasis will tell you that they have had “dandruff” for a long time.

The disease may attack any part of the body, and is almost invariably symmetrical. In outbreaks of any extent the trunk always suffers, but less rarely the face, and more rarely still the palms, soles, penis and scrotum.

It was formerly held that a scaly affection of the palms or soles without disturbance elsewhere must necessarily be either syphilis or eczema, and while this is true as a rule, it is now recognized that the disease may be limited to these regions without other manifestations.

The finger and toe nails usually suffer by extension of the disease from the hands and fingers, or the feet. The nails may be alone attacked. They become rough, thick, quite brittle, and streaked by longitudinal and transverse ridges, and, as in lichen ruber, may become lifted up and project away from the nail bed.

Psoriasis on the scalp rarely leads to even temporary loss of hair. In this region it may occur in bands and streaks or as discrete patches. According to Greenough psoriasis of the hairy scalp shows more or less epithelial scales, but not the redness common in other situations. The extension of the process from the scalp to the forehead, in the shape of a band running along the border of the hair, is very characteristic.

<sup>1</sup> Some French authorities (Besnier, Bourdillon) declare that if a great number of cases of psoriasis are carefully studied, it will be found that affections of the joints are present in a certain proportion of them—according to Besnier five times in a hundred.



Psoriasis, while very constant in its eruptive features, exhibits great variety as to the course and extent of the disease as a whole. It is essentially a chronic malady, although a given outbreak may have an acute aspect. Frequent relapse is the rule; sometimes one or more attacks occur in the course of a year, or again a considerably longer period may elapse. Occasionally, in some cases, the patient is never entirely free from the eruption. The amount of surface involved also varies much. The eruption may be absolutely universal, or limited to a few insignificant papules, and between these two extremes there may be all grades of implication of the skin. I have generally observed the disease to be worse in winter and better in summer. The eruption has been noted to disappear during general disturbances of nutrition, *e. g.*, in the course of typhoid fever, etc. J. C. White has reported a case in which warty growths supervened on a psoriasis, followed in turn by epitheliomatous degeneration.

Our knowledge of the essential etiology of psoriasis is meager. In spite of various experimental researches, it may be said that the affection is not contagious, and that its parasitic nature (Lang) has not been substantiated. That there is an inherited tendency to its development is beyond dispute. Like as in eczema, there would seem to be a vulnerability of the skin, and that, therefore, the disorder may be evoked by a great variety of internal as well as local causes. It has been observed in association with the gouty state, pregnancy, lactation, following in the wake of varicella, vaccinia, scarlatina, eczema, brought about apparently by mental states, the seasons, and, finally, coming into existence without any recognizable cause. Gower has seen a scaly eruption like psoriasis induced by the ingestion of borax, and I have known the inordinate eating of oatmeal to bring about the same result. Hebra said that psoriasis was a disease of healthy people, and certainly such patients often have a florid complexion and appear in exceptionally good health. Psoriasis is not peculiar to either sex, and attacks the poor and



the rich alike. The disease is said to be most frequent between the ages of three and fifty. Elliot records a case at eighteen months, and I have seen it develop for the first time in a woman aged sixty-seven. Of late years, especially in dispensary practice, I have been struck with the large number of children affected.<sup>1</sup> Unna would seem to doubt that psoriasis is anything more than an extreme and well-characterized type of seborrhœic catarrh. He declares from the anatomical standpoint that the basis of the change is in two factors, parakeratosis and epithelial growth, to which should be added dilatation of the vessels.

**DIAGNOSIS.** The diagnosis of psoriasis offers, as a rule, but few difficulties. The symptoms are very characteristic and pronounced; an eruption consisting of imbricated white scales, seated on red bases, sharply defined from the surrounding integument, affecting the extensor surfaces, especially the elbows and knees, and almost invariably involving the hairy scalp, itching but little if at all, and entirely dry throughout—are all features whose import it is not easy to mistake. It must be confessed, however, that atypical, ill-defined phases of the disorder are sometimes presented that render considerable circumspection in diagnosis necessary. The following diseases should therefore be carefully differentiated.

### Syphilis.

The scaling syphilides are especially liable to be confused with psoriasis. The history of the case must be taken into consideration. In psoriasis the patient is usually able to recall frequent attacks of the same kind of eruption, similarly situated, dating back perhaps from childhood, and, moreover, there will be no history of initial lesion, of mucous membrane involvements, and of diverse forms of eruption; in syphilis, on the contrary, this character of lesion is rare in early life, does not observe special

<sup>1</sup> See excellent paper by Greenough on Psoriasis in the Boston Med. and Surg. Jour., Sept. 10, 1885.



locations with the same pertinacity, and is not found in other members of the family.

The papulo-squamous syphilide is not at all apt to have the symmetrical arrangement of psoriasis, being usually found in certain definite portions of the body, and even on the palms and soles, where the resemblance is closest, one palm or sole may alone be affected. The scales are not so white and detachable as in psoriasis, being dirtier looking and more adherent, and the infiltration of the patch is more decided. The color of the lesions is more inflammatory, as it were, in psoriasis than in syphilis, and pigmentation after psoriasis is a rare event. The idea that in psoriasis only does punctate bleeding occur after forcible removal of the scales is fallacious and must not be depended upon.

#### **Eczema.**

The differential diagnosis of this disease has already been given at page 115 (q. v.); but I may mention that sometimes psoriasis develops unsymmetrically on an upper or lower limb as a large, feebly scaly, darkish red patch that looks not unlike a squamous eczema. In this instance it will be found, however, that there is no exudation, little or no itching, and the patch does not shade off insensibly into the surrounding skin, which latter feature is almost invariable in eczema.

#### **Seborrhœa.**

Both seborrhœa of the body and of the scalp bear a tolerably close likeness to psoriasis. Seborrhœa of the scalp may exist without lesions elsewhere, while psoriasis of the scalp is generally complicated with psoriasis in other situations; moreover, in seborrhœa of the scalp the scales are greasy and yellowish, and the eruption does not occur in patches and bands. Seborrhœa of the body is not symmetrically disposed, affecting principally the sternal and interscapular regions, while psoriasis is mostly symmetrical, and while found on other parts of the body, is nearly always to be detected on the elbows and knees. That



seborrhœa may be the starting point of a psoriasis, as well as an eczema, I am well convinced, and in this way it is proper to speak of a seborrhœal psoriasis. The scales in seborrhœa of the body are of the same character as those on the scalp, and the underlying surface is of a yellowish-red color.

For the differential diagnosis of psoriasis from *lichen planus*, *pityriasis rubra*, and *lupus erythematosus* the reader is referred to the sections treating of those affections.

TREATMENT. It is often of considerable importance to treat the patient as well as the psoriasis. I mean by this that the mere empirical administration of a drug must be supplemented or superseded by attention to diet, to apparent defects of health, and a study of personal idiosyncrasies and peculiarities. For example, dyspepsia must be corrected, anæmia relieved and the gouty or lithæmic state suitably combated.

In the full-blooded subject of gouty tendencies alkalies are undoubtedly efficient, aided perhaps by colchicum. A. R. Robinson recommends for such purpose the following mixture :

R.	Potassii acetatis,	̄j.
	Spiritus ætheris nitrosi,	̄iv.
	Vini colchici,	̄ij.
	Syr. aurantii,	̄jss.
	Aquæ carui,	q. s. ad ̄vj. M.

S. Dessertspoonful after meals in a wineglassful of water.

Arsenic may be combined with this mixture in suitable doses.

When the eruption is of an acute type the wine of antimony in five- or six-minim doses, three times a day, may be given with benefit as recommended by Morris.

Iron is of great value in children, who appear anæmic and out of health ; and the emulsion of cod-liver oil with the hypophosphites and lactophosphate of lime is often administered with advantage.

In a certain number of cases, probably the majority, no especial exciting or complicating cause can be detected,







Hebra was in the habit of increasing the dose to the limit of tolerance. The method is not to be recommended. The same may be said of the hypodermic injection of Fowler's solution, a mode of employment that would not be long tolerated in private practice. Corlett thinks well of the bromide of arsenic by the mouth.

Among other remedies for internal use in psoriasis that have been advocated from time to time may be mentioned cantharides, tar, carbolic acid, turpentine and phosphorus. Some years ago I made a trial of chrysarobin internally, being induced thereto by Napier's experiments with the drug, but I soon gave up the practice as being of doubtful efficacy and certainly very disagreeable in its effects on the patient. The huge doses of iodide of potassium recently recommended by Haslund and others I have not tried, and think them dangerous.

Some years ago Bramwell first advocated the treatment of psoriasis by thyroid extract, and, while it did good in some cases, the result on the whole has been disappointing. Crocker still seems to think highly of it in the "right cases," but he does not clearly define the indications for its use.<sup>1</sup> My own experience is far from gratifying and I now limit its employment to inveterate forms of the disease. Crocker advises that only one tabloid a day of the dried extract should be given at first; after three or four days two may be tried; and if at the end of a week or ten days no bad effects are observed, three tabloids daily may be prescribed. If no effect is produced in a month its employment should be abandoned.<sup>2</sup> The same authority praises highly salicylate of sodium or salicin especially in acute cases where arsenic and thyroid extract are contraindicated, but even in long-standing cases improvement may be expected. The dose given was fifteen grains three times a day, for an adult, of the sodium salt, or fifteen to twenty grains or more of the salicin. In my opinion the salicin is preferable since salicylate of sodium in large

<sup>1</sup> Twentieth Century Pract. Med., p. 275.

<sup>2</sup> Thyroidin may be used instead.



doses may set up an albuminuria. These drugs are not apt to be beneficial in limited chronic patches with but little hyperæmia.

Crocker also recommends grs. iiij to v of quinine dissolved in the acid portion of an effervescing citrate of potassium solution in widespread, inflammatory conditions of psoriasis.

Brault has given injections of the yellow oxide of mercury, and also calomel, in some instances combined with iodide of potassium by the mouth, with temporary benefit. Among other recent methods of treatment may be mentioned the intravenous injection of arsenic, the administration of cacodylic acid, and the subcutaneous use of testicular extract.

The local treatment of psoriasis is of especial importance; indeed arsenic and such like remedies produce in an indirect way, and by a circuitous route, the same changes in the skin that come from the local application of the tars and other topical stimulants. The first thing to be done in all cases is to remove the scales thoroughly, so that the remedy may come in direct contact with the diseased surface. Where larger surfaces are involved alkaline warm baths (carbonate of potash or soda, four or five ounces to water, thirty gallons), preceded by frictions with green soap, and followed by inunctions with vaseline, serve the purpose very well and are in themselves curative. In general acute cases the soap frictions should be omitted.

The scales may be removed from localized patches with soft soap and a nail brush. The following solution of salicylic acid may also be rubbed in with advantage:

R.	Acidi salicylici,	3j.
	Alcoholis,	3iv. M.

The following salve, recommended by Jamieson, is also efficacious in getting rid of the scales:

R.	Ammonii carb.,	3ijss.
	Lanolini,	3vj.
	Cerati Galeni,	3jss. M.
S.	Apply twice daily.	



For the direct local treatment of the disease a large array of remedies have been proposed, and every day witnesses new accessions to the list. I shall, however, direct attention only to those that have proved most efficacious in my own experience. In acute, generalized forms of the disease warm alkaline baths, followed by inunctions with vaseline, not only remove the scales, but sometimes cause the disappearance of the eruption. Mopping with the zinc and calamine lotion also relieves the hyperæmia. For chronic cases and more or less limited patches chrysarobin is undoubtedly the best remedy. Although it has many objectionable features I believe that in suitable cases, and in proper situations, it removes the eruption more speedily than anything else.

It may be employed as an ointment, or in the shape of a paint. An ointment made with lanoline or vaseline gives the best results. I prefer this formula :

R.	Chrysarobini,	℥ss.
	Ung. aquæ rosæ,	℥ij.
	Lanolini,	℥vj. M.
S.	Local use.	

Frictions made with this salve soon remove the eruption, but in addition to irremediably spoiling the underclothing it occasions more or less dermatitis, thereby necessitating its discontinuance. For this reason the pigments made with collodion or traumaticine are to be preferred, although they also have in a less degree the same objectionable features. The preparation advocated by G. H. Fox is made in this way :

R.	Chrysarobini,	gr. xlvij.
	Acidi salicylici,	gr. xlvij.
	Ætheris,	℥j.
	Collodii flex.,	q. s. ad ℥j. M.

As a rule I order the pigment made with the solution of gutta percha, after Auspitz's method.



R.	Chrysarobini,	gr. xxx-xlviij.
	Acidi salicylici,	gr. xxx-xlviij.
	Traumaticini,	℥j. M.

S. Apply with camel's hair pencil every fourth night ; then take a warm bath and reapply the remedy.

Besnier recommends that a fifteen per cent. solution of chrysarobin in chloroform be first painted over the eruption with a stiff brush, which, when dry, is to be followed by a varnish of traumaticine.<sup>1</sup> In a few days after the application of any one of these pigments the coating begins to peel off ; this should be facilitated by a warm bath, after which another application may be put on.

Chrysarobin should not be used on the face, scalp, about the privates or where the skin is very thin. If very much dermatitis is set up, the chrysarobin should be discontinued, and only renewed after its subsidence, in the meantime mopping on the calamine and zinc lotion. If the drug is going to prove of benefit its good effects are manifested in a few days. It should be kept up till the patches are quite free of scales. The appearances left behind after the use of chrysarobin are quite characteristic, the former areas of disease remaining for a season preternaturally white, while the surrounding integument is deeply discolored.

Pyrogallie acid in ointment, or better in pigment (℥j-℥j), is somewhat slower in its action than the chrysarobin, but it is more cleanly, and were it not that it cannot be used over too large surfaces, on account of toxic effects sometimes ensuing, it would in many cases largely take the place of the former.

In former years tar was the chief remedy in psoriasis, and it is still regarded very favorably by many.

It may be used in the form of the officinal ointment, or as the oleum cadini or oleum rusci, variously diluted or pure. I have generally used the tincture of green soap with tar.

<sup>1</sup> Traumaticine is a ten per cent. solution of gutta percha in chloroform.



R. Saponis olivæ præp.,  
Olei rusci,  
Alcoholis,                                 āā ʒj. M.

S. Rub firmly into the patches twice a day.

Greenough suggests the following as an eligible formula in private practice :

R. Olei cadini,  
Glycerini,  
Alcoholis,

āā ʒj. M.

Tar also may be prescribed in the form of an alcoholic tincture, or the liquor carbonis detergens and the liquor picis alkalinus, pure or diluted, may be painted over the eruption.

Sulphur sometimes acts very well in comparatively mild cases. I generally order it combined with salicylic acid.

R.	Acidi salicylici,	ʒj-ʒss.
	Sulphuris præcip.,	ʒjss.
	Vaselini,	ʒj. M.
S.	Rub in thoroughly twice a day.	

In the modified Wilkinson's ointment we get the benefit of both tar and sulphur:

℞. Sulphuris sublimati,	
Olei cadini,	āā ʒiv.
Saponis viridis,	
Adipis,	āā ʒj.
Cretæ præp.,	ʒijss. M.

This preparation is of especial value in much infiltrated plaques. The Vlemminckx's solution, pure or variously diluted, is useful in a similar condition of affairs.

Among other remedies of more or less efficacy may be mentioned thymol, turpentine, creasote, naphthol, anthra-robin and the mercurials.

What has been said above in regard to the treatment of psoriasis refers more especially to the disease as it exists on the general surface, but occurring on the face, scalp, hands or feet the method of procedure must be somewhat modified. Psoriasis on the face is best treated by the white precipitate salve.



- R. Hydrarg. ammoniati, gr. xx-3j.  
 Ung. aquæ rosæ, 3j. M.  
 S. Local use.

A paste is usually more agreeable and equally beneficial.

- R. Hydrarg. ammoniati, gr. xx-3ss.  
 Zinci oxidi, 3ss.  
 Pulv. amyli, 3ij.  
 Vaselini, 3j. M.  
 S. Apply in thin layer to eruption.

The mercurial should not be applied over too large a surface at a time for fear of absorption.

The sulphur and salicylic acid ointment is also useful here. On the scalp the scales should be first washed out with the tincture of green soap, after which, according to circumstances, may be applied some preparation of tar, mercury or sulphur. Among the efficient preparations for this purpose are the following:

- R. Liq. picis alkal., 3j.  
 Hydrarg. ammoniati, 3ss.  
 Vaselini, 3j. M.  
 S. Apply to scalp.

- R. Olei rusci, 3j.  
 Glycerini, 3ij.  
 Alcoholis, q. s. ad 3vj.  
 Olei rosæ, q. s. M.

- S. Apply with medicine dropper and rub in thoroughly.

The sulphur and salicylic acid salve already mentioned is also beneficial. Psoriasis of the palms and soles may be treated with much satisfaction by applications of the compound salicylated soap plaster spread on muslin, as well as by the pigment of chrysarobin and salicylic acid.

PROGNOSIS. Psoriasis as usually encountered does not interfere with the general health, and is only of importance from the disfigurement and discomfort it occasions. Relapses are the rule, but their frequency and the extent of the eruption will vary in different cases. It may be said in a general way that a given outbreak may be removed, but the time necessary to accomplish this result cannot always



be precisely stated ; nor can the physician declare how long a period will elapse before another relapse will take place. I believe that much can be accomplished in modifying the course of the disease by constant and intelligent supervision on the part of the medical attendant, provided he has the coöperation of the patient in his endeavors.

### PITYRIASIS MACULATA ET CIRCINATA.

This affection, which is also called pityriasis rosea, was first described by Gibert, and subsequently by Horand, Bazin and other French writers. Duhring was the first in recent years to redirect attention to this interesting disease. It is a comparatively rare disorder and while it may occur at any age it is said to be more frequent in childhood. According to some authorities an outbreak of the disease is usually preceded by malaise and a subsequent slight rise of temperature,  $102^{\circ}$  F., but this latter occurrence must be rare.

Brocq states that, anticipating the general eruption from four to fifteen days, there appears about the waist, neck or arms a single patch—*plaque primitive*. This patch is oval or circular, its edges are of a bright red, and it is a little elevated and covered with delicate adherent scales.

Subsequently, and more or less suddenly, a great number of patches make their appearance over the body. These lesions continue to come out until a considerable surface is involved. The whole body, with the exception of the hands and feet, may be affected, but the sites of predilection are the upper portions of the trunk, as, for example, the clavicular regions, sides of the chest, the shoulders and often the neck. The eruption presents two apparently distinct types ; the macular type consisting of small pin-head to pea-sized lesions, rosy-red in color, not clearly defined, and having a scaly surface ; the other or circinate form, possessing a rounded or oval outline, and a well-defined border, which may attain a diameter of from one-half to one inch. The larger patches are developed from the small primary lesions, and in many instances



these latter undergo a central involution and present red and scaly peripheral rings and characteristic parchment-like centers. In course of time these rings become broken and by the coalescence of other segments of circles various gyrate figures may be formed. Many of the lesions, however, do not pass through the same stages of development, and as a consequence the different forms mentioned above may be present at the same time.

There is but little infiltration of the skin; in fact the thickening is only barely appreciable. Subjective symptoms are not marked, and consist in most cases of slight burning or itching. The disease is self-limited, tending to spontaneous recovery in from two weeks to as many months.

The disease is not contagious in the ordinary sense, although it may affect several members of a family, and it has been seen to occur epidemically. The Vienna school regard it as a form of ringworm, but clinical experience does not bear out this view. Crocker suggests that the affection is due to a micro-organism which is absorbed into the circulation and distributed to the skin. So far the result of bacteriological research has been negative, although Vidal thought that he had demonstrated a causative parasite, the "*microsporon anomœon*." Oro and Mosea, after thorough investigation, clinical and bacteriological, look upon the disorder as a "pseudo-exanthem." Kromayer records a curious case in which an eruption resembling pityriasis rosea was produced by the irritation of a pair of new stockings.

**DIAGNOSIS.** Pityriasis rosea differs from ringworm of the body in that it is, as a rule, more widely distributed, and never shows papules, vesicles or pustules in the borders; and, moreover, examination of the scales discovers no parasitic elements. This disease also resembles seborrhœa corporis (seborrhœal eczema), but the greasy scales in the latter eruption, the sometimes papular periphery, and its usual limitation to the sternal and interscapular regions will suffice for the differential diagnosis.

It is to be distinguished from the erythematous syphilide



in that the syphilitic lesions are not scaly, are of a different color, and that other evidences of syphilis are generally present.

**TREATMENT.** Internal remedies are not required. If itching is a prominent symptom the zinc and calamine lotion, with five or ten minims of carbolic acid or liquor carbonis detergens to the ounce, serves a good purpose. Ointments of sulphur and boracic acid have been recommended. I have obtained the speediest results with a pigment of salicylic acid and solution of gutta percha.

R.	Acidi salicylici,	gr. x-xx.
	Traumaticini,	ʒj. M.
S.	Apply to eruption with camel's hair pencil.	

**PROGNOSIS.** The disorder tends to spontaneous recovery.

### DERMATITIS EXFOLIATIVA.

In a general way exfoliative dermatitis may be defined as an acute or chronic, general or partial, cutaneous inflammation in which the epidermis is freely shed in large or small scales. When we inquire more particularly into this process, and attempt an orderly classification of its phenomena in order to fix its exact nosological position, we are met by many difficulties and differences of opinion. Some writers would include under the condition known as general exfoliative dermatitis cases of pityriasis rubra, pemphigus foliaceus, and various states of the skin secondary to eczema, psoriasis, lichen ruber, etc. Other authorities, on the contrary, draw a sharp line of distinction between these various processes. Clinically, the resemblances are very close; for example after the subsidence of the bullous stage of pemphigus foliaceus it is indistinguishable from pityriasis rubra; the only difference being in the manner of onset of the two diseases. Then again, the symptoms of an acute attack of general exfoliative dermatitis are very much like those of pityriasis rubra, the principal point of dissimilarity being in the chronic course of the latter. From the clinical standpoint, leaving out



of consideration those cases of chronic exfoliation of the skin following in the wake of pemphigus foliaceus, psoriasis, etc., I shall briefly describe the acute general form and the chronic form, commonly called pityriasis rubra.

### Acute Exfoliative Dermatitis.

The disorder is usually ushered in with a chill, followed by slight fever and constitutional disturbance. This

FIG. 2.



Exfoliative Dermatitis.

systemic disturbance is particularly well-marked in the relapsing cases. The involvement of the skin is at first local—in one of my cases beginning as a red patch at the pit of the stomach—but more or less quickly the whole



integument may be implicated. The skin is at first free from scales and may be bright red, violaceous or of a dusky hue. There is some degree of pruritus. In a few days the cuticle begins to desquamate in large or small, thin, papery scales. The character of the desquamation is influenced by situation; on the scalp it is furfuraceous, on the body and upper portion of the extremities the scales are generally large and more or less imbricated, while from the hands and feet I have seen the epidermis shed in great, thick, glove-like pieces. The hair is shed in the course of the disease, sometimes even the beard, eyelashes and pubic growth; the nails are also lost. The mucous membranes may also participate in the general process. Some cases are complicated by an ephemeral eruption of vesicles, blebs or pustules. In severe cases the general state of the patient may excite much apprehension, either from the extreme emaciation and debility present, or from the existence of serious complications. The affection may last from two or three weeks to as many months.<sup>1</sup> Undoubtedly, there are much milder grades of exfoliative dermatitis than the one just described. There are also local forms. For example, I have a patient who has attacks at irregular intervals, preceded by sharp constitutional disturbance, that are limited to the hands and feet.

#### Chronic Exfoliative Dermatitis, or Pityriasis Rubra.

According to Hebra and others pityriasis rubra is a disease *sui generis*. As in the acute form the disorder begins in one or more localized patches. These coalesce and gradually invade the whole body. The skin may be of a dark or vivid red, or bluish-red. The desquamation

<sup>1</sup> Sligh (Internat. Med. Mag., June, 1893) reports the remarkable case of a man aged thirty-six who has suffered from a form of exfoliative dermatitis regularly every year since infancy. He has certain premonitory symptoms in the shape of bone-ache, nervousness and anorexia, he vomits and there is a slight rise of temperature. In a few days he has shed his skin from the entire surface, including finger and toe nails. The new skin is soft and tender, but rapidly becomes normal and in four or five days the patient is able to take up his work once more.



is very free; the scales are thin and papery on the general surface, imbricated, and from a line to an inch or more in diameter. When the integument is freed of the scales, it has a shining, tense appearance. The skin is not infiltrated as a rule, and there is no moisture. There may be œdema of the lower limbs. Alopecia and exfoliation of the nails also occur. The patient complains but little of itching, but his skin feels too small for him, and he is apt to be chilly, even in the warmest weather. Febrile exacerbations occur now and again. The disease lasts months or years; there is generally a fatal termination, either due to progressive emaciation and consequent exhaustion, or else the patient is carried off by some intercurrent affection. Jadassohn has endeavored to establish a connection between pityriasis rubra and tuberculosis of other organs, and particularly with tuberculous changes in the lymphatic ganglia. I have published elsewhere brief notes of a typical case of this chronic malignant form of generalized exfoliative dermatitis.<sup>1</sup>

#### **Dermatitis Exfoliativa Infantum.**

Under this designation v. Rittershain calls attention to a severe form of exfoliative inflammation of the skin, which appears between the second and fifth weeks of life. It is not contagious. Boys are more often attacked than girls. The disease begins around the angles of the mouth as an erythema, with a tendency to the formation of cracks. The mucous membrane of the cheeks is injected, and here and there are to be detected superficial losses of substance. The inflammation extends from the face to the rest of the body. The epidermis exfoliates, generally after some amount of fluid has accumulated beneath it. The affected parts have the appearance of an extensive burn. The skin of the hands and feet are cast off in large flakes. Miliary vesicles are to be observed on the forehead in some cases; in other cases

<sup>1</sup>The St. Louis Courier of Medicine, May, 1888. I have recently seen this patient and find him, after all these years, in about the same condition.



the eruption resembles an eczema ; in still others a pemphigus. Desiccation takes place rapidly. In some instances, where there is only a partial involvement of the surface, the process is dry throughout, and the skin is thickened and fissured. The disease lasts about a week, and is usually unattended by systemic reaction. Among the sequelæ are to be noticed a tendency to eczema, furuncles and even phlegmon and gangrene, with a fatal termination. The affection is very fatal. Two of the cases that came under my observation had a lethal termination.<sup>1</sup>

**DIAGNOSIS.** An exact clinical diagnosis of the various forms of exfoliative dermatitis is not always easy. The history of the case is of paramount importance. The acute general varieties of the disease should be differentiated from scarlet fever, and the medicinal rashes ; and pityriasis rubra is to be recognized from its chronicity, the non-infiltrated state of the skin and the absence of moisture, the latter feature, in the shape of flaccid blebs, characterizing the onset of pemphigus foliaceus. Generalized pityriasis rubra should be distinguished from universal psoriasis and lichen planus by the character of the primary eruption in these latter affections.

**TREATMENT.** Little can be accomplished as regards the cure of pityriasis rubra. The patient may be made more comfortable by the use of emollient applications, such as vaseline, the unguentum vaselini plumbicum, and the administration of roborant medicines. Ten drops each of tincture of iron and fluid extract of ergot have seemed to me to be serviceable. The acute form of exfoliative dermatitis is best treated with diaphoretics, such as pilocarpine and jaborandi. Locally, the employment of soothing ointments and lotions is indicated ; among the most grateful of which are the calamine and zinc lotion, the unguentum vaselini plumbicum and a mixture of oxide of zinc, glycerine and mucilage (R. *Zinci oxidi*, ʒss ; *glycerini*, mucilag. *acaciæ*, āā ʒij ; *acidi carbolici*, ℥x. M.).

<sup>1</sup> Elliot reports two cases with remarks in *Am. Jour. Med. Sci.*, Jan., 1888, also an excellent account of the disease in *Morrow's System*.



**EPIDEMIC EXFOLIATIVE DERMATITIS.**

In this connection it is proper to refer to a peculiar affection to which attention was first called by Savill. Beyond some anorexia for a few days preceding the eruption, which is present in some cases, there are no premonitory symptoms, the eruption itself being the first indication of the presence of the disorder. The skin lesions are represented at first by an erythematopapular rash which is sometimes diffused, or in the shape of blotches, that may be grouped or solitary. In some instances flat papules were observed, which extended after the manner of a ringworm, having an elevated circle of congestion enclosing an area covered with small vesicles. The initial eruption begins to subside in a few days, to be quickly followed, however, by the development of new patches that become symmetrical, confluent and generalized. The second stage lasts from three to eight weeks. In one type of the disease the affection resembles an acute eczema, in another type pityriasis rubra. In the third stage, or that of subsidence, the skin is left greatly thickened, and presents a polished brown appearance.

In a number of cases the skin looked raw and parchment-like with cracks and fissures. The arms and forearms are usually first involved and next the face and scalp. There is much systemic disturbance, while the local symptoms consist of burning and itching. The temperature is but little elevated, or may be subnormal. A fatal termination may be expected in the old and weak.

The disease has been observed in workhouses, and it is supposed to be contagious. Diplococci have been found by several observers. Fordyce, Colby and Winfield have reported cases in this country.

**PARAKERATOSIS VARIEGATA.**

This is a rare chronic disorder of the skin observed by Unna. His description is as follows:<sup>1</sup> The back, neck,

<sup>1</sup> *Monatshft. f. prakt. Derm.*, 1890, Vol. XI.; *Histopathology of Dis. of Skin*, p. 338.



breast, abdomen and ultimately the extremities are the seat of yellowish to brownish red spots and flat papules, always increasing in number, that are sharply defined, or else connected by processes by which a marbled, variegated appearance of the surface is produced. The slightly elevated papules are either covered by a thickened, smooth horny layer or are decked with fissured scales. There is barely any infiltration of the cutis, and subjective symptoms are absent. The affection is regarded as a superficial inflammation of the skin accompanied by severe œdema of the papillary body and epidermis.

### URTICARIA.

This common affection, vulgarly called nettlerash or hives, is characterized by an eruption of pomphi or wheals. These are somewhat firm, more or less elevated, evanescent efflorescences, varying in size from pin's head to hen's egg or larger, round, oval or irregular, of a whitish to rosy color, and most frequently accompanied by intense itching, tingling or burning. They show no predilection for any part and no tendency to symmetrical arrangement, but crop out irregularly here and there, varying in number from one or two to hundreds or even more, the entire surface being more or less completely covered. They make their appearance suddenly, retain their form for a few minutes to several hours, and then vanish as abruptly as they came, leaving no trace. The mucous membrane of the mouth, pharynx, respiratory tract and stomach may also be affected. The following variations are noted :

When the lesions are distinctly papular, as is frequently the case in children, the eruption is termed *urticaria papulosa* or *lichen urticatus* (Willan) and when through unusual abundance of the serous effusion, vesicles and bullæ are produced, *urticaria vesiculosa et bullosa*. True hemorrhage into the wheals constitutes *urticaria hemorrhagica* or *purpura urticans*. In some persons the irritability of the integuments is so great that wheals in any shape or form can be artificially produced by the slightest mechan-



ical irritation, and words or figures, drawn by the finger nail or any blunt instrument, take on all the characters of an urticarial lesion—a condition known as *urticaria factitia*.

*Urticaria papulosa*, or *lichen urticatus*, as already stated, occurs mainly in children. In these cases, owing to the inflammatory effusion, a small solid papule is left upon subsidence of the more ephemeral wheal.

The eruption produces an intense pruritus so that in some cases the primary trouble is hidden by the secondary eczema or pustular dermatitis. Usually, however, the only visible lesions are white or pale red, small scratched papules scattered over the surface. In many cases the urticarial element is not apparent at first sight. This form of urticaria is excessively distressing and is apt to keep up for a long period.

It is customary to speak of acute and chronic urticaria, and this division of the subject serves a good purpose in that it helps to direct attention to the etiological factors concerned in the production of the disease.

#### Acute Urticaria.

The rash may be ushered in with considerable systemic disturbance, the temperature running up several degrees (*urticaria febrilis*); or there may be a day or two of malaise before the eruption makes its appearance, the symptoms of gastric disturbance being well marked. Urticaria of this type may persist for a number of days, being the source of much local and even general distress. On the other hand, a copious eruption of wheals may make its appearance suddenly and without premonition of any sort, and after a longer or shorter period as suddenly disappear. Undoubtedly the mucous membranes may also be involved in the urticarial process and give rise to severe internal disturbances involving the stomach, bowels and respiratory tract.

(Edema of the glottis with fatal results may also occur. I have also several times witnessed cases in which there



occurred coincidently with the cutaneous rash symptoms of passive congestion of the brain, what may be called cerebral urticaria.

### Chronic Urticaria.

In chronic urticaria the eruption comes and goes during a long period of time. These periods of outbreak are as a rule quite irregular, although cases have been observed, probably of malarial origin, in which the nettlerash displayed a marked periodicity. The lesions are not apt to be as widespread or numerous as in the acute form. I recall one case of chronic urticaria in which the wheals were limited strictly to the feet and hands, and during the entire period of its existence—several years—it never traveled beyond those parts. Urticaria papulosa of children is a typical example of the disease in its chronic and relapsing form. Closely allied to urticaria is the condition called dermatographism, or autographism. It is a state of potential irritability of the skin encountered in a number of different and diverse disorders, such as affections of the brain and spinal cord, heart affections, rheumatism, hysteria, etc. The lesions are similar to those observed in urticaria, except that there is no uniformity in the subjective sensations, itching and burning sometimes being present and again absent, and while the skin is hyperæsthetic in most instances it may at times be anæsthetic. The dermatographic state is established most frequently without the knowledge of the subject, but once established it may be brought into activity by various external stimuli. Barthélemy thinks the etiological factors are a susceptible nervous system, hereditary or acquired, and the action of some toxin. A whole class of neurotic phenomena, such as stigmata, hæmatidrosis and neurotic excoriations are considered by this observer as closely allied to dermatographism.

*Acute Circumscribed Cutaneous Œdema.* See Œdema.

**ETIOLOGY.** Urticaria is due to various direct and in-



direct causes acting upon the vaso-motor system. The wheal is brought about in all likelihood by a spasmodic contraction of the capillaries, which in turn is followed by paresis and the consequent production of a localized œdema from serous exudation. The exciting agencies are very numerous, and may be of central, peripheral or reflex character.

Among the local causes of urticaria may be mentioned irritants of all sorts, such as the bites of insects,<sup>1</sup> coarse flannels, certain vegetable substances, the local application of electricity, etc.

The indirect causes are infinitely more numerous, and somewhat difficult to classify.

Derangement of the gastro-intestinal tract occupies above all the first place in the etiology. Here we find that foods and medicines of many kinds, or perhaps of any kind under certain circumstances, may give rise to urticaria. Among the first named may be especially mentioned shell fish, pork, oatmeal, pastry, buckwheat and strawberries; and among the latter the preparations of cinchona, copaiba and cubebs. Intestinal worms often excite the disease in children and malaria may evoke a decidedly intermittent type of nettlerash. Of recent years attention has been called to the fact that urticaria may occur after puncture of an echinococcus cyst. The chronic forms of the disease are observed in connection with various disorders of the male and female sexual apparatus, in affections of the stomach, bowels, kidneys and liver; also as depending upon various disturbances of the brain and spinal cord, and in alternation with attacks of asthma. Mental emotion, fright, anger and even joy are also held responsible for the eruption in some instances.

**DIAGNOSIS.** The recognition of urticaria is usually an easy matter. The characteristic fugitive, nettle-like lesions accompanied by intolerable itching are to be seen in no other affection of the skin. Papular urticaria, or lichen

<sup>1</sup> Hutchinson believes that lichen urticatus is always originated in this way. This is certainly not true for all cases.



urticatus, in the absence of the history of wheals may suggest scabies, but the localization of the eruption and the non-existence of burrows, and the probable freedom of other members of the family from a similar-looking eruption should soon settle the question. The papular and tubercular forms of erythema multiforme might create some confusion, but in this affection the lesions burn and do not itch as in urticaria, they are more uniformly red, and are distributed in a symmetrical manner.

**TREATMENT.** In all cases the cause must be ascertained and removed if possible. Mild outbreaks often pass away without any special treatment beyond relieving the local distress. Acute attacks are generally due to gastric disturbance from irritating foods, etc., and when severe the stomach must be emptied by emetics, and castor oil or some other mild aperient given.

Sometimes such a condition will persist, being kept up by repeated exacerbations, for a number of days, and produce a condition of mind and body hardly short of agonizing. In such instances the state of the mucous surfaces is perhaps closely allied to that seen on the skin, and the treatment should consist of soothing substances like bismuth combined with bicarbonate of sodium. At the same time alkaline mineral waters should be taken copiously. The diet should be bland and unirritating. In the majority of cases of recurrent urticaria it will be found that some article of food or drink is at the bottom of the mischief; consequently, whatever is obnoxious in this respect should be ferreted out. Indeed in treating chronic urticaria it must be constantly remembered that, under certain circumstances of idiosyncrasy, the disease may be set up by the most various and diverse causes, and in intractable cases the physician must carefully study the history, health and habits of each case. The main lines of this investigation are indicated under etiology.

Generally success will attend judicious efforts made in these directions, but unfortunately there will remain a residuum of cases that are apparently without cause. In



such instances we must resort to empirical remedies. C. Heitzmann has spoken well of ergot in full doses, and I have occasionally seen it succeed. Belladonna and atropia may be tried in appropriate doses. Among other remedies may be mentioned quinine, iodide of potassium and salicylate of sodium or strontium. Pilocarpine hypodermically and by the mouth is sometimes valuable. Antipyrine and phenacetine will give temporary relief. Wine of antimony in five-drop doses often does good. Wright strongly advises chloride of calcium in urticaria, and Savill and others have used it in different forms of pruritus. The usual dose is twenty grains well-diluted after meals, but this quantity may be increased to forty grains or more. It should be kept up for quite a period. Ichthyol internally in the dose of from two to six grains three times a day often acts well. It is best given in pill or capsule.

Lotions of soda and water, vinegar, pure or diluted, brandy, whiskey, cologne, alcohol, etc., are all well known and often useful domestic remedies for local application. Carbolic acid is probably the best antipruritic agent in our possession. It is generally mopped on the surface in the form of a lotion, but I think it is very much more efficacious if sprayed on through an atomizer.

R.	Acidi carbolici,	℥ij-iv.
	Glycerini,	℥j.
	Aquæ,	q. s. ad ℥xvj. M.
S.	Use as a spray.	

To increase the effect five to ten drops of the oil of peppermint may be added to each atomizerful of the preparation.

The liquor picis alkalinus and liquor carbonis detergens may also be used, in the same strength as the carbolic acid, in the form of a spray.

The often-quoted calamine and zinc preparation is also very valuable as a lotion, combining with it a small quantity of carbolic acid.



R.	Acidi carbolici,	℥j.
	Zinci oxidi,	℥ss.
	Pulv. calaminæ præp.,	℥iv.
	Glycerini,	℥j.
	Liq. calcis,	℥vij. M.
S.	Mop on freely.	

Menthol combined with carbolic acid will afford relief at least temporarily.

R.	Menthol.,	℥ij.
	Acidi carbolici,	℥ss.
	Alcoholis,	
	Glycerini,	āā ℥j.
	Aquæ,	℥iv. M.
S.	Mop on with soft rag.	

Among other remedies of this class are to be noted a solution of benzoic acid (℥j–℥xvj); menthol in solution with alcohol and water (R. Menthol., gr. xxx–℥ij; glycerini, ℥ss; alcoholis, ℥jss; aquæ, q. s. ad ℥jv. M.); thymol (gr. j–℥j) and borax (gr. v–℥j).

Ointments sometimes give relief when lotions fail. For limited eruptions chloral and camphor (R. Camphoræ, chloralis, āā ℥ss–℥j; ung. aquæ rosæ, ℥j. M.) or menthol (R. Menthol., gr. x–℥j; vaselini, ℥j.) may be employed. Tar in salve form is beneficial but dirty. A soft cream-like preparation recommended by Macintosh in eczema is equally serviceable in urticaria.

R.	Bismuthi subnitratis,	℥ij.
	Zinci oxidi,	℥ss.
	Glycerini,	℥jss.
	Acidi carbolici liq.,	℥xx–xxx.
	Vaselini,	℥vj. M.
S.	Apply with fingers or brush.	

Baths, both acid and alkaline, may be administered in certain cases. Bulkley suggests in chronic cases a bath containing carbonate of potassium, ℥viij; carbonate of sodium, ℥vj; borax, ℥iv. Of these ingredients take from two to four teaspoonfuls with an equal quantity of starch



to each gallon of water. After the bath, when the body is dry, the surface should be anointed with carbolated cosmoline. Galvanic and faradic electricity often give marked relief.

**PROGNOSIS.** Acute urticaria is readily recovered from when the offending cause is removed. In chronic cases the prognosis should be guarded, as it is sometimes very difficult to discover and eradicate the exciting influence. Occasionally urticaria is fatal from œdema of the glottis.

### URTICARIA PIGMENTOSA.

Urticaria pigmentosa (xanthelasmaidea, Fox) is a rare type of urticaria and differs in many particulars from the forms just described. It begins within the first six months and occasionally within the first few days of life, although Elliot reports a case that did not begin until the twenty-seventh year. The wheals come out suddenly, either singly or in numbers, have a brownish-red to yellowish color, are unusually persistent, and after weeks or months gradually shrink and disappear, leaving brownish pigmentation. At times the lesions are complicated with vesicating apices, or even bullæ form surrounded by a zone of congestion. Hallopeau<sup>1</sup> reports a case in which there were atrophic spots arranged in transverse lines. He regards them as the result of the involution of the lesions. Duhring<sup>2</sup> believes that there are two forms of the so-called urticaria pigmentosa, one being a persistent urticaria of a peculiar type, the other having more the features of a new growth. Its course is essentially chronic and while the older lesions are passing away new ones are forming, so that the different stages from the fresh tubercle to the resulting stain are usually all present at the same time and make up a truly variegated picture. It affects mainly the trunk and neck, then the head, face and limbs. An analogous condition has also been observed in the mouth and pharynx. Urticaria factitia is common. Itching may or

<sup>1</sup> Pictorial Atlas Diseases of the Skin, Part XII.

<sup>2</sup> Cutaneous Medicine, Part II., p. 302.



may not be present. After an indefinite and variable length of time new tubercles are no longer evolved, those already formed are absorbed, and about the time of puberty or sooner the trouble has run its course, though in a case reported by Levinski<sup>1</sup> tubercles were still appearing at the age of eighteen.

Most authors agree that the disease should be classified among the neuroses of the skin, or, as Hallopeau expresses it, among the trophic neuroses. The characteristic histological expression of the disease is the presence in great abundance of "mastzellen." The coloration of the lesions is due to the presence in the deeper layers of the epidermis of pigment granules.

The treatment is unsatisfactory, but relief may be given to a certain extent by the remedies employed in ordinary urticaria.

### ŒDEMA OF THE SKIN.

Although œdema of the skin is attendant upon a great variety of trophic and vascular disturbances, it will be possible here to glance merely at those conditions in which it constitutes the principal clinical symptom.

(Edemas from injuries to nerves, in the course of neuralgia, neuritis, rheumatism, malaria, erysipelas, and also in connection with cerebral affections, are fully recognized, but are scarcely of dermatological interest. The same may be said of the œdema of the menopause and the various types of hysterical œdema, as well as the so-called blue œdema of Charcot and the hysterical breast. Quinke's acute circumscribed œdema and the œdema of the newborn will only be described in this work. The latter affection will be considered in connection with sclerema neonatorum (q. v.).

#### Acute Circumscribed Œdema.

The disease usually comes on without warning in the shape of circumscribed œdematous patches varying in size

<sup>1</sup> Virchow's Archiv., Bd. 88, 1882.



from a hickory nut to an orange, of a light or dark red color, and disappears as rapidly as it came. There is little or no itching, but probably some burning and a sense of tension. The lips, cheeks, eyelids, the limbs and the mucous membranes of the mouth, pharynx and larynx, may be attacked. Many different localities may be affected simultaneously or one only; vomiting and diarrhœa may accompany an attack, and Joseph has seen paroxysmal hæmoglobinuria associated with it. Recurrence is the rule, and in some instances the disorder is clearly hereditary. It is certainly closely allied to the giant urticaria described by Milton. When the disease attacks the larynx it may cause death by suffocation unless promptly relieved. The treatment is essentially that of urticaria (q. v.).

### LICHEN.

In a practical work of this sort it is unnecessary, even if space permitted it, to discuss the various vexed questions relating to the relationship existing between lichen planus and lichen ruber on the one hand and the connection between the lichen ruber acuminatus of Kaposi and the pityriasis pilaris rubra of the French writers, not to mention certain types that have been described by Unna, Neisser and other eminent dermatologists. I shall content myself with the description of lichen planus, a disease of comparatively frequent occurrence in America, and in its proper place of pityriasis rubra pilaris, a disorder much more rarely encountered, but still having clearly defined and unmistakable features. For the sake of completeness, in connection with lichen, brief notices will be made of various other types of this group whose exact position is more or less uncertain. The so-called lichen scrofulosorum will receive attention along with the tuberculous affections of the skin where it properly belongs.

### LICHEN PLANUS.

Wilson says of lichen planus that it is a very remarkable form of eruption, consisting of papules, that are



broad at the base, flat and seemingly glazed on the summit, slightly umbilicated, of a dull, purplish-red color at first, in certain situations discrete and isolated, in others united by a hyperæmic and infiltrated base into patches of variable extent. Examined somewhat more in detail, and in the light of further study, we are enabled to determine the following features :

The eruption is usually symmetrically disposed. It may appear upon any part of the body, but the sites of predilection are the flexor sides of the forearms, about the wrists particularly, the flanks, around the waist, lower part of the abdomen, around the knees and on the calves, less frequently on the hands and feet, and also on the mucous membranes. I believe the eruption has never been observed on the face.

The lesions consist in the beginning of round, red papules, that finally become more or less angular in outline, varying in size from a pin's head to a split pea, which project abruptly from the surface of the skin to the height of about a line. The surface of the papules is smooth and shining, quite often depressed in the center, and sometimes in the larger papules may be seen white, milium-like spots, that can be dug out, and consist of epithelium.

After reaching their full development the papules do not increase by peripheral extension as in psoriasis, for example, but they may go on multiplying in number. According to Robinson the surfaces of the small isolated papules are devoid of scales, but in older and larger lesions a thin transparent layer of horny cuticle is present.

The color of the papules is a dull, crimson red, suffused with a purplish or lilac tinge (Wilson). Wickham states that on the papules, when one is accustomed to observe them, may be seen certain whitish points and striæ, which are quite characteristic, and are similar in appearance to the whitish lines found on the mucous membranes, especially the cheeks, when those parts are affected in this disease.

The papules may remain isolated throughout their



course, or they may be arranged in groups, lines or bands. By increase in the number of lesions, and their close aggregation, variously sized, sharply limited, elevated patches appear, which are covered with scales and closely resemble psoriasis. At times large surfaces may be thus involved. The term lichen verrucosus is applied to chronic, infiltrated plaques whose surfaces may be plush-like, or else horny and scaly (Jamieson). These patches may be of various sizes, and are prone to involve the lower limbs. These forms correspond to the lichen hypertrophique and lichen corné of French writers. Each papule runs its own course, either of longer or shorter duration. Vesicles and blebs have been noted as rare complications.

It is characteristic of lichen planus that the older lesions leave behind them marked pigmentation and even atrophic spots. Itching is present in varying degrees—sometimes slight or again very intense. The hair and nails are never implicated. The majority of patients with lichen planus that have come under my observation have been in good, sometimes robust, health, or else have exhibited only such systemic disturbances as may be found preceding or accompanying any other affection of the skin.

T. C. Fox, Crocker and others have described a form of lichen planus occurring in children. The papules are acuminate at first, but later become flattened; they show a tendency to grouping, and are accompanied by much itching. They come out suddenly, and it is said may be made to disappear quickly by soothing applications. Crocker says it is common in children who perspire freely.

Morris, in his text-book, makes the important statement that lichen planus is not infrequently combined with pityriasis rubra pilaris (the lichen ruber acuminatus of Kaposi) and that this complication renders the condition of the patient much more serious.

The disease, I believe, is met with more frequently in females, certainly in my own experience. It is most apt to occur in adult life, although not unknown in childhood.

The essential etiology is obscure. Very often no ap-



parent exciting cause can be determined ; at other times a probable causal connection may be established for various forms of nervous exhaustion, digestive and uterine derangements, rheumatism, etc. ; in fact, just such disorders of the health as we are in the habit of connecting with eczema and the like cutaneous affections.

According to Unna the *livid, bluish-red color* is the more pronounced the less the papules reach, at the commencement, over the level of the skin ; it is due to the thick cellular layer (thickened epithelium and compact cellular infiltration of the cutis), which lies like a dense opaque medium over the dilated capillaries. The dark brown or black color of the older papules is brought about by the subsequent pigmentation. The *burnish* of all the non-sealy papules depends on the stretching of the horny layer, and this on the abnormal pressure under which they stand during their whole development. The *dryness* of the lichen papule and the absence of a tendency to the formation of vesicles, in spite of the inter-spinal œdema, depends also on the firmness and power of resistance which, from the beginning, the epithelium of the papule possesses.

DIAGNOSIS. The diagnosis of lichen planus is generally not difficult. The large, angular lesions depressed in the center, their shining aspect, purplish color, typical situations and usual symmetry concur in presenting a clinical picture that is easy of recognition.

It is possible to confound lichen planus with psoriasis, syphilis and papular eczema. When the papules of lichen are confluent and sealy the resemblance to psoriasis is close, but the distribution of the lesions on the elbows, knees and on the scalp, and the absence of itching in the latter disease, while the shape of the papules, their color, and the pigmentation in the former, will generally suffice for the distinction. From the syphilides it is differentiated by the shape and color of the lesions, the itching, the situations occupied, and freedom from the concomitant symptoms of syphilis ; moreover, the lesions are of one kind,



and not polymorphous. Certain cases of papular eczema are not unlike in their lesional manifestations to lichen planus. I have often seen large, angular, depressed papules in eczema. As a rule, however, in eczema, there is a history of discharge and crusting, and, moreover, the papular lesions in the vast majority of cases are small and acuminate, and, under any circumstances, have not the duration of the lichen papule.

**TREATMENT.** The indications for internal treatment are to remove complications and to remedy any appreciable defect of general health. Therefore, according to circumstances, iron, quinine, arsenic, cod-liver oil, pepsin, bismuth, alkalies, etc., may be prescribed. In a recent case thirty- to forty-drop doses of the solution of chloride of calcium relieved the itching and apparently proved curative. Mr. Malcolm Morris has obtained gratifying results from the internal use of biniodide of mercury in generalized lichen planus, but in the chronic localized forms the drug was without appreciable benefit. Cantrell also thinks well of the biniodide of mercury. The latter observer is inclined to regard the extract of cantharides as another remedy of value in this disease.

Locally, in acute cases, when considerable surface is involved, alkaline baths and soothing lotions are demanded. The calamine and zinc lotion, to which has been added a small quantity of tar, is admirable for the itching.

R.	Liq. carbonis detergentis,	℥j.	
	Lotionis zinci et calaminæ,	℥vj.	M.
S.	Mop on frequently.		

Instead of the tar two drachms of menthol, first dissolved in a little alcohol, may be added to the zinc and calamine lotion.

In chronic cases the treatment should be more stimulating. Wilson recommended a bichloride of mercury lotion of the strength of two grains to the ounce, and also the Vleminckx's solution, which latter, however, should be diluted at first. Unna extols the following, with which



the patient should be rubbed twice a day, being kept in bed in the meantime :

R.	Hydrargyri bichloridi,	gr. ij-v.
	Acidi carbolici,	gr. x-xx.
	Ung. zinci oxidi,	℥j. M.

The following formula may also be used to advantage in some instances :

R.	Liq. carbonis detergentis,	℥j.
	Zinci oxidi,	
	Zinci sulphatis,	
	Potassæ sulphuratæ,	āā ℥ij.
	Glycerini,	℥ij.
	Aquæ rosæ,	q. s. ad ℥iv. M.

I have used a pigment of chrysarobin and salicylic acid with much satisfaction in localized patches.

R.	Chrysarobini,	gr. xl.
	Acidi salicylici,	gr. xl.
	Traumaticini,	℥j. M.
S.	Paint on with camel's hair pencil.	

The tincture of green soap with tar is also valuable. I generally prefer the following formula of Piffard's, somewhat modified.

R.	Saponis olivæ præp.,	℥iv.
	Olei rusci,	
	Glycerini,	āā ℥j.
	Olei rosmarini,	℥jss.
	Alcoholis,	q. s. ad ℥viiij. M.
S.	Rub in with a piece of flannel.	

Jacquet and Brocq warmly advocate hot sedative douches. The water of a temperature varying between 34° and 38° C., according to personal susceptibility, is poured upon the body from a watering pot with a wide nozzle, care being taken that it should not be projected too energetically. The duration of the douche is two to five minutes. Sometimes this process may be concluded with a cold jet of water lasting a few moments.



**PROGNOSIS.** Neglected cases may last for months or years, but under suitable treatment the prognosis may be regarded as favorable.

### OTHER FORMS OF LICHEN.

According to Brocq<sup>1</sup> from whose admirable account these descriptions are condensed, the following objective varieties should be classed with the true lichen ruber planus, that disease being considered a prototype of the group.<sup>2</sup>

#### Lichen Ruber Obtusus.

The papules are wax-like, smooth, free from scales, semi-circular, hemispherical, semi-conical, or flattened at their tops, often slightly umbilicated and from three to five millimeters in size, but attaining occasionally the diameter of a pea.

The eruption may remain localized, but the whole body may be invaded, forming large plaques by commingling of contiguous lesions. It is not especially itchy.

Unna says it may represent the only form of lichen present or that there may appear at the same time lesions of lichen planus or lichen acuminatus.

#### Corneous Lichen Ruber Obtusus.

This variety is characterized by large papules three to ten millimeters in diameter, and are principally found on the upper and lower extremities. They begin as rose tinged, rounded or hemispherical papules, which increase slowly in size, at the same time taking on a café au lait hue that is more or less pronounced according to their stage of development. They become covered in the center,

<sup>1</sup> Twentieth Century Practice of Medicine, Vol. V., article Lichen Ruber. Unna (Histopathology of the Skin) says that the limited and purified lichen represents—like eczema and syphilis—a polymorphous group of eruptions in which a uniform complex of symptoms forms, both clinically and histologically, the base.

<sup>2</sup> In this connection I wish to state that in the disease commonly recognized in America as lichen planus of Wilson that personally I have never observed other elements mixed with it, that is, in sufficient number to change the clinical character of the affection.



and finally over the whole surface, with dry, grayish and adherent scales. The lesions are itchy and remain discrete. Brocq is uncertain whether they should be included in the lichen group or should be classed among the dermatoneuroses.

#### **Lichen Ruber Moniliformis.**

Kaposi<sup>1</sup> described under this title certain efflorescences, red to yellowish in color that projected in the shape of threads, ridges and sausage-like swellings, and arranged in bands and necklaces. In the neighborhood of these networks of spherical swellings and in the spaces between were to be found characteristic nodules of lichen ruber planus arranged in dense masses, in streaks, or else disseminated. There were also in the case reported diffuse sepia-like staining, and also punctiform pigment spots situated between the nodules. He states that the unusual development of the lichen papules caused them, when arranged in rows, to assume the notched appearance. Similar forms have been described by Rona and Dubreuilh. On histological grounds Unna disputes the position of this so-called lichen ruber moniliformis.

#### **Lichen Ruber Acuminatus Neuroticus.**

Unna under this name has described a cutaneous disorder in which are present small acuminate papules, millet seed in size, having no umbilication, covered with adherent scales and developed around a hair follicle. In the beginning they are discrete, the intervening skin becoming red, swollen and infiltrated, later they become confluent, forming extensive patches of a bluish-red color that are slightly scaly and exceedingly itchy. The disease runs an acute course, often appearing after profuse sweating. The general condition is serious, the patient being feeble and suffering from nervous excitement. The prognosis is usually good, but the disease may become chronic, and the patient die from marasmus or by intercurrent disease.

<sup>1</sup> Diseases of the Skin. English Translation, N. Y., 1895.



**Corneous Lichen Ruber Planus (Vidal).**

This form is usually found on the anterior part of the legs, but also, exceptionally, upon the thighs, hips or forearms. It is constituted of different sized patches, the average being of the dimensions of a silver half-dollar. The plaques are rounded, oval or irregular. Their surfaces are uneven, being covered over with numerous openings corresponding to the apertures of sweat ducts or hair follicles, and sometimes plugged with epidermic cones. The plaques are decked with fine gray scales, adherent and stratified, and forming here and there rough masses. The color is variable, being at times rosy or red, and again blue, brown or black. The skin is very thick and the patches project distinctly and have well-defined borders. Other characteristic papules of lichen ruber planus may be present in other situations. This so-called variety would seem to be nothing more than the commonly recognized hypertrophic lichen planus.

**Lichen Planus Atrophicus.**

The papules in this form are at first like those of ordinary lichen planus, but less colored; afterwards they become pale, flatten out and form patches with punctiform depressions and of a whitish and cicatricial appearance. The outline of the plaques is irregular; discrete papules are to be noted at their borders, some flat and colorless, others still rosy and active. These patches are scattered over the limbs and trunk.

**LICHEN PILARIS (Crocker).**

Crocker describes under the name of lichen pilaris, or lichen spinulosus (Devergie) an inflammatory disease of the hair follicles in which a spiny epidermic peg occupies the center of the papule. It resembles keratosis pilaris somewhat, especially when the inflammation has subsided, but, according to Crocker, although the last mentioned disease has an epidermic plug, it is not spiny like that of



lichen pilaris, and there is no objective redness; besides lichen pilaris is not a diffuse eruption, but occurs in acute or subacute crops, arranged in patches, on the back of the neck, buttocks, trochanteric regions, abdomen, back of thighs, popliteal spaces, and extensor surfaces of the arms.

Alkaline baths and frictions with the hand while in the bath are advised as preliminary measures, followed by a liniment of soft soap and tar. Internally tonic treatment is required.

### PITYRIASIS RUBRA PILARIS.

There would seem to be no question that the greater number of cases described as lichen ruber acuminatus are really examples of the disorder now definitely recognized as pityriasis rubra pilaris. Kaposi, for example, recognizes this identity, although it must be admitted that certain writers still maintain that there exists a special cutaneous disease deserving the name of lichen ruber acuminatus, and distinct from the affection considered in this section.

Since my own experience of this disease is very limited I shall again avail myself for the most part of Brocq's excellent presentation of the subject.<sup>1</sup> The beginning of the disorder is by no means uniform. In rare instances there is an acute onset in which there is a more or less generalized scarlatiniform redness of the skin (erythrodermia), with special localization on the hands and feet, and considerable systemic reaction; these symptoms soon abate, however, and the affection runs its usual indolent course.

In the majority of cases the development is gradual. Sometimes it may begin with the appearance of characteristic papules scattered over the trunk or upper limbs, especially upon the postero-external surfaces of the forearms and on the dorsal surfaces of the phalanges; or again as a dry, scaly eruption upon the palms and soles. It is pointed out that we should regard with suspicion marked and chronic desquamation of the bed of the nail, and the presence of seborrhœic scales upon the scalp, redness of

<sup>1</sup> Twentieth Century Practice of Med., N. Y., 1897.



the skin of the face, and a pityriasic desquamation of the eyebrows and beard. The characteristic expression of the disease is in the form of acuminate or conical, more rarely round or umbilicated papules. These lesions are pierced

FIG. 3.



Pityriasis Rubra Pilaris (after Taylor).

by atrophied hairs, which are ensheathed in horny and sebaceous layers that dip down into the follicle. They are dry, rough to the touch, making the integument to feel like the skin of a plucked fowl, more or less red, but at



times brownish or grayish white. The papules are isolated in the beginning, but gradually increase in numbers and eventually run together. The papules are found in those regions where the hair is most abundant, that is, on the first and second phalanges of the fingers, on the outer aspect of the forearms, the outside of the thighs, the legs, the buttocks, but also in the neighborhood of the elbows and knees, about the waist and the inferior part of the abdomen.

After the coalescence of the papules has occurred from increase in numbers of the lesions the individual papules are lost in yellowish or brownish-red patches covered with micaceous scales. The skin becomes much thickened, its natural folds are exaggerated, and it assumes a permanent yellowish color. At the borders of the patches it is generally possible to discover the typical conical papule characteristic of the disease, but this is not always possible, and at times the implication of the integument is general.

When the disease attacks the face, as it does in most instances, the skin presents different aspects; at times it is of a dusky red, with much contraction and subsequent ectropion, or it is covered with greasy crusts or presents a fine desquamation. The scalp exhibits usually a furfuraceous desquamation, but according to Brocq there are no cones surrounding the hair and the skin is not appreciably red; more rarely there is a marked seborrhœa of this region.

The skin of the palms and soles is sometimes greatly thickened, or these surfaces exhibit reddened patches, are dry and itchy, with slight desquamation and an exaggeration of the usual lines and furrows. The nails present diverse appearances, sometimes being marked with transverse furrows or else with longitudinal elevations and depressions; or again they will be thickened. Pain may be present to a considerable degree. Subjective symptoms are said to be absent in most cases, but at times there may be marked pruritus. It is also claimed by European authorities that the general health of the patient is un-



impaired.<sup>1</sup> The following case reported in the first edition of this book as an example of lichen ruber I am now satisfied represents a severe type of pityriasis rubra pilaris.

“ Mrs. M., æt. fifty, when first seen presented the following appearance: From the feet up to the waist, and from the hands to a few inches beyond the elbows, the surface was red, scaling and infiltrated. The skin of the palms and soles was enormously thickened, dry, harsh and fissured, so much so indeed that the use of the members was attended with pain and difficulty. The nails were brittle, pitted and lifted from their beds by the subungual thickening. Without making a further investigation, one would be satisfied that the condition present was a chronic exfoliative dermatitis; but a closer inspection showed that while on the greater portion of the limbs the skin presented a uniform dark red, infiltrated, scaling surface, as the borders of these most highly involved areas were reached, this uniformity of appearance was somewhat gradually lost.

“ It is apparent that the eruption is made up of certain more or less distinct elements, arranged in rows or lines; and further out still the papules, for such they are seen to be, become more and more individualized, and finally perfectly discrete. What is so graphically described by Taylor is seen to great advantage here, namely, that the very earliest lesions are minute pin's point spots, which give a roughened feel to the skin. Where the papules are older they are rounder, dark red, and covered with scales, and where they are more closely set they become flatter, and after reaching full maturity are about of the diameter of a line. The evolution of the lesions shows no aberrations, that is to say, where the papules are miliary and conical no obtuse or flattened papules are to be seen, and among the older lesions none of the elementary forms; in other words, the march of the affection is steady and pro-

<sup>1</sup> In a certain proportion of the few cases that I have observed I have seen both marked local disturbance and impairment of the general health.



gressive, and after reaching a certain stage the papules undergo no further individual growth, but become finally, yet gradually, merged into solid sheets of infiltration. It may be said that the whole cutaneous surface of this patient is involved; from the waist downward, and from the elbows downward, an exfoliative, infiltrated condition of the skin; and from those regions upwards, viz., the upper arms and the trunk, a papular eruption in different degrees of distribution and development. The face showed no papules anywhere, but it is somewhat red, and especially over the brows the redness and desquamation is most marked. Considerable dandruff on the scalp. There is much complaint of burning and itching about the buttocks and over the sacral region, otherwise the chief trouble would seem to be the sensation of excessive dryness and roughness of the skin, as perspiration is almost absent. The disease has now been in existence for about eight months, and the patient has materially improved under treatment, but up to this time she had been in a very pitiable condition, and with progressive loss of flesh, sleeplessness, general debility and great mental despondency, was rapidly tending towards a marasmic state."

The etiology of this disease is obscure. It is said to be more frequent in men than in women, and according to Besnier, while it may begin at any time of life it is most apt to appear for the first time in infancy or youth. Jaquet has found that the cone surrounding the hair is due to an exaggerated cornification of the epithelial wall of the infundibulum of the follicle.

**DIAGNOSIS.** The essential feature of the diagnosis is the conical papule pierced by a hair; and in most cases even when the lesions have run together to form sheets of eruption single outlying papules may be identified. According to Morris the best place to find the papules is the backs of the fingers; here they can be picked off, leaving little pits behind and giving the skin a cribriform appearance. The disease should be differentiated from pityriasis rubra, ichthyosis, keratosis pilaris and psoriasis.



**TREATMENT.** Pilocarpine by the mouth or hypodermically will relieve the excessive dryness of the skin. Brocq recommends arseniate of sodium in increasing doses for internal use, but the results of constitutional treatment are not especially flattering. Locally, soothing pastes and lotions may be applied when inflammatory conditions are present; in more chronic states tar, pyrogallic acid and similar remedies are required. Salicylic acid plasters may be employed for the thickened patches on the palms and soles.

**PROGNOSIS.** The prognosis is usually favorable, but relapses are common.

### **DERMATITIS FACTITIA.**

Feigned eruptions, or eruptions that have been artificially produced by hysterics and malingerers are far from uncommon. The following points should be remembered in establishing a diagnosis: In the first place, we should ascertain the antecedents of the patient and take particular note of the present condition; secondly, we should discover if the patient has ever suffered from any skin disease before, and whether he had been, or was at the time, making use locally or internally of any medicinal preparations. We should make a mental comparison of the lesions present with other known eruptions of the skin and note any especial anomaly. The local expressions of the manifestation should be closely investigated as regards, for example, infiltration, itching, burning, etc. Finally, it must be remembered that most eruptions produced with intent to deceive generally occupy accessible situations, and in right-handed people, for instance, are apt to be found on the left side of the body.

The late Dr. Tilbury Fox has pointed out that the simulated skin affections are usually of the following forms: The eruption is in erythematous or excoriated patches, such as may be produced by rubbing or by mustard; or bullous or pustular, or deeply ulcerative, and such lesions as could be caused by cantharides, croton oil or



some corrosive acid; or such an eruption as could be brought about by the constant forceful use of the finger-nails; or it is a pigmentation, *e. g.*, simulating chromidrosis, produced by black lead, candle black, nitrate of silver, grease and other compounds.

### DERMATITIS GANGRÆNOSA.

Gangrene of the skin may result from a great variety of causes, local and constitutional; for example, it may follow upon the prolonged or excessive action of heat or cold, from the application of chemical agents, from the ingestion of ergot, from shock, and in symptomatic connection with various cerebral and spinal disorders; also from changes within the vessels, alterations in the vessel wall, and from external pressure.

From the clinical standpoint the following types are worthy of especial attention:

#### Spontaneous Gangrene of the Skin.

This form of gangrene occurs mainly in hysterical young women, and consists of irregular plaques, unsymmetrically disposed, and sometimes, it is said, spreading in a serpiginous manner. It is more than likely, however, that this condition is, in the majority of cases, always artificially produced; yet it is possible that the derangement of the nervous system incident to the hysteric may be responsible at times. Quinquand and Joseph have reported cases occurring in men similar in all respects to the form of the disorder seen in women. Crocker has seen two cases in adults resembling the dermatitis gangrænosa of infancy—one patient, a male, was just recovering from scarlet fever, and the other, a woman, had been the subject of a suppurative vaginal disorder.

#### Diabetic Gangrene.

Gangrene, usually unilateral, and preceded by inflammation and the formation of blebs, is sometimes seen in diabetics. A part of the sole, the ball of the toe or the



dorsum of the foot may be affected. In a case of Kaposi's disseminated bullæ on an inflamed base followed by eschars appeared on the left leg. From these centers the process advanced serpiginously. Gangrene of the penis is not infrequent.

#### Dermatitis Gangrænosa Infantum.

Gangrene of the skin in strumous and syphilitic children is of not infrequent occurrence after varicella and other cutaneous affections. It is most common under the age of three years, and consists of superficial or deep ulcerations covered by a slough and situated at the site of the original lesion, or it may be independently.

The disorder presents considerable variations in intensity. In some cases the patches of gangrene are widely scattered and numerous, accompanied by high fever and leading to a rapidly fatal ending; or there may appear a series of small pustules, each of which sloughs and leaves a minute cicatrix, with an indefinite prolongation of the disease by successive crops.

The opinion originally held by Hutchinson, that all these cases followed either varicella or vaccinia, has now been surrendered; for, although perhaps most frequent after these disorders, it would seem that under certain dyscrasic states—*e. g.*, syphilis and tuberculosis—the disease may have its starting point in any pustular, vesicular or bullous disease of the skin. Microbic infection is highly probable.

DIAGNOSIS. This should present no difficulty.

TREATMENT. Tonic and supporting treatment is usually urgently demanded. Crocker thinks well of sulphocarbolate of soda in five-grain doses, and quotes Coutts as getting a good result with opium. Carbolic acid poultices may be used until the sloughs have separated, and subsequently the ulcers may be dressed with iodoform or aristol, either dry or in vaseline.

PROGNOSIS. In young children with extensive local involvement, high fever and other complications the outlook is grave.



**Symmetrical Gangrene (Raynaud's Disease).**

This affection, first described by Maurice Raynaud, consists of three morbid conditions, probably due to one and the same cause—viz., vasomotor spasm of the arterioles, usually of the extremities, and a consequent retardation or arrest of the circulation in the parts attacked. Raynaud divided the disease into three stages as follows: local syncope, local asphyxia and local gangrene. The process does not necessarily pass from one stage into another; it may stop short of the extreme stage of the disease or exhibit other variations in its course. Neither is it always symmetrical, and other parts of the body may be attacked, such as the nose, ears, etc.

**LOCAL SYNCOPÉ.** In the disorder popularly known as “dead finger” the fingers or toes become bloodless, cold and dead-white. When sensibility returns there is more or less painful reaction in the shape of burning, tingling and pain. Women are more apt to be attacked than men, and the attacks usually supervene after exposure to cold or as the result of mental emotion.

**LOCAL ASPHYXIA.** This stage may be preceded by attacks of local syncope, or the parts may suddenly become cyanosed and cold and present a bluish-white or blue-black appearance. In the majority of instances the extremities, fingers and toes, are the points of attack, and the invasion is symmetrical. More rarely the ears or nose are involved, a portion or the whole of the leg, or the disease may be limited to livid patches on the backs of the hands, limbs or trunk. Both the subjective symptoms and the duration of the asphyxia present considerable variations. Pain and burning may be intolerably severe or comparatively slight and the attack may last for a few seconds only or persist for several hours or days. The attacks may come on irregularly, sometimes several times in a day, especially after exposure to cold, or they may be markedly quotidian in type. After repeated paroxysms the affected digits may, in some cases, become flabby and œdematous. English observers have shown that hæmoglobinuria may be a



concomitant phenomenon during this stage of the disorder.

**LOCAL GANGRENE.** In this stage the fingers may become pallid, then turn lilac, violet or lividly blue. There are usually burning, itching and severe pain. The neighborhood of the affected parts takes on a livid mottling, and the members become black and insensitive to touch. Vesicles or blebs form, which presently burst and leave small ulcers that heal after a few days. After this process has been frequently repeated the fingers shrivel up and show numerous little white scars and distorted nails. In other instances phlyctenulæ do not appear, but the digits become black and gangrenous, and a superficial or deep slough forms, occasionally attended by loss of the distal phalanges or even more extensive destruction. The general health may be good in spite of the intense pain, although I have seen patients much reduced from this latter cause. As in the milder grades of the affection, other parts may be attacked, but are not so apt to slough, although sloughing does occur.

Raynaud's disease is more common in males than in females; it is most frequent between the ages of fifteen and thirty, although it has been often observed in young children. Lowered temperature and mental emotions are immediate exciting causes. It is associated with many and rather diverse general states, such as syphilis, tuberculosis, malaria and particularly hæmoglobinuria. Heredity would seem to play some part in its production. Whether the spasm of the arterioles is due to central or peripheral irritation is as yet undecided, some authorities regarding it as central and due to a blood poison and others as a peripheral neuritis.

**DIAGNOSIS.** The disease may under some circumstances suggest both chilblain and senile gangrene, but attention to the history of the case will readily prevent a mistake in these directions.

**TREATMENT.** The general treatment consists in due attention to the health, and it is said that much can be



accomplished in the earlier stages by preventing exposure to cold and securing a good circulation by appropriate bathing and judiciously selected clothing. Quinine internally has appeared of benefit in some cases. I have tried the nitrate of amyl on theoretical grounds, but without any good result. Raynaud recommended the use of a descending galvanic current. If applied to the spine the positive pole is placed in the region of the neck at the fifth cervical vertebra, and the negative at the sacrum and lower lumbar region; or the negative pole may be applied directly to the affected parts. Barlow directs that the affected limbs should be placed in a basin of warm water and salt together with one pole of the battery, while the other pole should be placed on the member at its upper part. A current should be used as strong as the patient can tolerate. Shampooing is also a valuable adjunct. In the gangrenous cases the parts are treated on the ordinary surgical principles for such conditions. At times amputation may be necessary.

### DERMATITIS MEDICAMENTOSA.

It is of great importance for the physician to keep in mind that various eruptions of the skin follow upon the ingestion of many drugs; in fact, under certain circumstances, any drug may give rise to cutaneous symptoms, although these effects are more prone to occur after the administration of certain remedies than after others; thus the salts of iodine, if taken largely and for considerable periods will almost invariably give rise to eruptions on the skin, while it is an exceptional circumstance for quinine to be followed by an exanthem.

According to Van Harlingen,<sup>1</sup> who was one of the first

<sup>1</sup> Article on Dermatitis medicamentosa in Woods' Ref. Hdb. Med. Sci.; also his exhaustive paper on the same subject in Arch. Dermatol., Oct., 1880. The reader may consult besides Morrow's valuable treatise on "Drug Eruptions," N. Y., 1887, which is the most complete monograph extant. This last mentioned work has been edited, with copious notes, by T. Colcott Fox, for the New Sydenham Society.



to investigate the untoward effects of drugs on the skin, these disturbances occur in fairly well-defined groups, and are more or less alike in their features. Erythematous, scarlatiniform and urticarial rashes are the usual lesional expressions; less frequently they are pustular, bullous, purpuric and nodular. While there is nothing characteristic about these drug eruptions, a close scrutiny will show that they present some anomalies; at one time being unaccompanied by fever when fever would be expected, or appearing in unusual situations, or running an unusual course, etc.

Morrow states that the dermatitis set up by the local application of drugs acts just as caloric or mechanical irritants do upon the nerve element alone. When the peripheral extremities of the sensory nerves are irritated there ensues a paralysis of the vasomotors of the vascular area affected, with resulting dilatation of the blood-vessels and consequent cutaneous changes of a greater or less degree; and when the inflammation spreads over a large adjacent surface, it is probable that the centripetal irritation is communicated to the vasomotor center of the spinal cord, which is reflected over wider vascular areas. Finally, the drug being absorbed, the same series of effects may happen as after ingestion of the drug.

Morrow is further of opinion that in some cases the inflammatory phenomena are reflex, being due to irritation of the sensory nerves of the gastro-intestinal mucous membrane, but that in a larger proportion of cases they are secondary to absorption of the drug, and are the result of the action of an irritant circulating in the blood upon the vasomotor centers of the peripheral nerves. Certain severe forms of eruption are probably due to an impression of the drug upon the trophic centers that regulate nutrition. While these theories undoubtedly explain in a satisfactory way the mechanism of drug eruptions, we must acknowledge an individual idiosyncrasy back of the phenomena which it is difficult to understand.

The untoward effects upon the skin of a few of the



more important medicinal agents will be now briefly considered.<sup>1</sup>

### **Acidum Boracicum.**

Papules, bullæ and an erythematous rash have followed the local use, in injections and washes, of boracic acid. Erythematous, eczematous and morbiliform rashes have followed internal use. Gowers and Liveing have reported the occurrence of a scaly psoriasis-like eruption after the long-continued internal use of borax.

### **Arsenicum.**

Arsenic applied to the skin produces all grades of inflammatory reaction from simple dermatitis to extensive destruction of tissue, and as a consequence of its frequent employment in the arts, in the composition of toilet articles, etc., its baneful effects are quite thoroughly recognized. Every variety of cutaneous lesion may be excited by its internal use. Hutchinson long ago called attention to the frequency with which herpes zoster supervened upon its employment, and of late years it has been shown that thickening of the palms and soles with warty outgrowths, often accompanied by hyperidrosis, are not uncommon sequences of its long-continued administration. The occurrence of grayish or brownish discolorations upon the face, neck and abdomen have frequently been observed after a prolonged administration of the drug, but I have endeavored to show that this is not an essential primary pigmentation, but that it is always preceded by a sensible degree of inflammation of the skin.<sup>2</sup>

### **Belladonna, Atropia.**

The most frequent rash following the internal use of belladonna and its alkaloid is an erythema. It is quite suggestive of scarlatina, appears in tolerably well-defined

<sup>1</sup> The details, much abbreviated, are taken for the most part from the article by Morrow in his *System of Genito-urin. Dis., Syphilology and Dermatology*.

<sup>2</sup> *Jour. Cutan. and Genito-urin. Dis.*, April, 1898.



patches, occurs mostly about the face and neck, and is of a fugitive character. The dilatation of the pupils, the absence of fever and the evanescent course of the eruption should distinguish it from the cutaneous manifestation of scarlet fever. A vesicular and erysipelatous dermatitis is also occasioned by its local employment, for example, following the application of belladonna plasters and the instillation of atropine solutions in the eye.

#### **Acidum Carbolicum.**

The local application of carbolic acid commonly gives rise to an erythema, which may extend from its place of origin and become generalized. Vesicles may form and even gangrene may supervene.

#### **Acidum Salicylicum—Sodii Salicylas.**

Vesicular eruptions frequently appear under salicylic acid surgical dressings. The internal use of the salicylates have occasioned erythematous, vesicular, urticarial, pustular and hemorrhagic lesions. Herpetic and pemphigoid eruptions and gangrene of the lower extremities have also been reported. Salol is credited with producing urticaria.

#### **Aconite.**

The internal use of this drug has resulted in the production of vesicles, pustules and bullæ; and a vesicular affection and an erysipelatous inflammation have followed its local application.

#### **Antifebrin.**

Cyanosis and other toxic effects have been frequently observed.

#### **Antimonium.**

Lesions closely resembling the pustules of variola follow its local use, and urticaria and vesico-pustular eruptions its ingestion.



### Antipyrine.

This drug produces an eruption that resembles measles. It occurs mostly on the chest, abdomen and back, and consists of slightly elevated, reddish, discrete or confluent papules that are accompanied by sweating and itching. The rash may last four or five days, leaving occasionally some desquamation upon its subsidence. Bullous, purpuric and furuncular eruptions have also been reported.

### Argenti Nitras.

The well-known bluish or steel-gray color following on the prolonged use of this drug has long been recognized. An erythemato-papular rash has also been observed.

### Arnica.

The damage to the skin that may result from the popular use of arnica as a lotion and embrocation is not fully appreciated. It causes symptoms not unlike those of rhus poisoning, and in severe cases blisters followed by gangrene with much destruction of tissue have been observed.

### Bromine.

This salt, and its compounds, gives rise to a variety of eruptions, the best known being those of a papulo-pustular character, the so-called bromic acne. Lesions of a carbuncular character, and also vesicles, blebs and urticarial eruptions have been observed. Lesions resembling condylomata, ulcerations and nodes are also credited to these salts.

### Chloral.

Erythematous, papular, vesicular and urticarial eruptions. The first named is the most frequent and is strongly suggestive of scarlatina. Graver eruptive forms, such as ulcers, boils, blebs and carbuncles have also been noted.

### Cinchona.

The various preparations of cinchona act alike in the production of disturbances of the skin, but as quinine is



the salt usually administered this fact is sometimes overlooked. Erythematous, urticarial, petechial, bullous, papular, vesicular and even gangrenous lesions have been recorded as following the use of the cinchona preparations. In my own experience the erythematous and urticarial forms are the commonest. The erythematous eruption closely resembles the scarlatinal efflorescence, and moreover usually terminates in a lamellar desquamation. The quinine exanthem is responsible for many of the presumed second and third attacks of scarlet fever.

#### Chrysarobin.

The dermatitis that follows upon the application of this drug is now well known, but the fact that papular, pustular and furuncular affections may develop is not so well recognized.

#### Copaiba and Cubebs.

The eruption from copaiba is generally of a maculo-papular character, and is chiefly important from its resemblance to the erythematous syphilide, and, according to Morrow, to r $\ddot{o}$ theln. The sites of predilection for the eruption are the abdomen, feet, hands and arms. The erythematous syphilide is distinguished from the copaiba roseola by the fact that in the former there is no itching, and that the configuration, color and location of the two eruptions are quite different; and finally that the person taking copaiba is apt to emit a disagreeable resinous odor from the skin. Urticaria is also a tolerably common form of eruption from copaiba. Other varieties are the bullous, petechial and vesicular. Cubebs when administered alone, rarely excites any disorder of the skin.

#### Hydrargyrum.

Inunctions of mercury sometimes provoke a vesicular eruption, and at times a severe dermatitis and destruction of tissue. Generalized exfoliative dermatitis has been known to occur under similar circumstances. Various



lesions of the skin may result, but certainly rarely, from its internal use.

### **Iodine, Iodide of Potassium, Etc.**

Eruptions from the iodide of potassium or other iodides may be erythematous, papular, pustular, bullous, urticarial, tubercular or hemorrhagic. The most usual and familiar variety is the papulo-pustular. Its common seat is the face, back, upper part of the chest and shoulders. Confluent, papillomatous lesions may arise from an aggregation of these lesions. Vesicles and bullæ are among the rarer manifestations of the untoward effects of their preparations.

### **Iodoform.**

Erythema from the local application of iodoform is a comparatively common accident, but in some cases grave forms of dermatitis may follow, such as vesicles and blebs. Papular, urticarial and hemorrhagic eruptions have been recorded.

### **Opium, Morphia.**

Pruritus is one of the chief disturbances of the skin set up by the opium alkaloids. Certain inflammatory lesions, such as urticaria and erythema, have also been observed.

### **Tuberculin.**

Diffused scarlatiniform and morbiliform rashes, followed by desquamation have been observed after tuberculin injections; also generalized eruptions of psoriasis have been recorded as following these injections in lepers.

### **Antitoxins.**

Urticarial and more rarely erythematous and papular eruptions have followed the injection of antitoxin serums.

TREATMENT. The treatment of the various forms of drug eruptions consists naturally in the discontinuance of the exciting cause, and, when required, the use of such



local remedies as may be indicated under the circumstances. Sometimes, however, it is quite essential to keep on with the offending substance notwithstanding its evil effects. Various remedies have been suggested as capable of modifying the action of the bromine compounds, as arsenic, sulphide of calcium, belladonna and aromatic spirits of ammonia. The simultaneous local use of a sulphur lotion is also useful in preventing, particularly, bromic acne. Morrow gives  $\frac{1}{100}$  gr. atropine to counteract the effect of the iodides upon the nasal and conjunctival mucous membranes. I am in the habit of prescribing ten-drop doses of tincture of nux vomica with iodide mixtures. The drug may also be administered in vichy, milk, junket, etc. Unna strongly advises the use of dilute hydrochloric and other mineral acids to prevent the poisonous effects of pyrogallol and chrysarobin, thus diminishing the alkalinity of the blood.

### DERMATITIS TRAUMATICA.

In this group are to be found those inflammatory changes in the skin resulting from traumatism, such, for example, as excoriations and abrasions from scratching, from the pressure of tight or ill-fitting shoes, awkwardly applied bandages, braces, etc. There are marked pigmentation and induration of the skin, when the source of irritation is long continued. The treatment consists in the removal of the cause, and the application of remedies of a soothing character.

### DERMATITIS VENENATA.<sup>1</sup>

This title is usually accepted as meaning all forms of inflammation of the skin produced by external irritating agencies, whether from the animal, vegetable or mineral kingdoms. The number of substances capable of exciting this pathological state is exceedingly large, and those liable to such attacks are to be found in all the relations

<sup>1</sup> For a full treatment of this subject see White's valuable monograph on "Dermatitis Venenata," Boston, 1888.



of life. White has shown that, in the vegetable world alone, more than sixty plants are to be found in the United States that may give rise to varying degrees of dermatitis. In particular there are three species of plants found in this country that are capable of producing active inflammation of the skin of individuals exposed to their influence whether from actual contact or mere proximity. These are *Rhus toxicodendron*, or Poison Ivy, *Rhus venenata*, or Poison Sumach, and *Rhus diversiloba*, or Poison Oak. The last named is met with on the Pacific coast. Pfaff has pointed out the error of Maisch's conclusions in regard to toxicodendric acid and has shown that the irritant principle is a fixed oil called by him toxicodendrol. The character of the dermatitis from rhus poisoning varies in intensity; sometimes it is merely an erythema, or there are a few scattered papules, or else there supervenes acute swelling of the skin with the formation of vesicles, pustules and blebs. There are marked sensations of itching and burning. The hands, face and genitals are usually involved, sometimes the entire surface. The disease may last from one to six weeks. The poisonous principle may be conveyed in an early stage of the affection from one part of the body to another, or perhaps to a second person; but according to White after the poison has been absorbed or removed by washing or volatilization, there is no risk of contagion. The effects of exposure show themselves in from a few hours to several—four or five—days.

Susceptibility to rhus poisoning once established would appear to be permanent.

TREATMENT. The treatment of dermatitis venenata should be conducted on general principles, taking care, of course, to rid the skin of the source of irritation as soon as possible. There are many so-called specifics for rhus poisoning, for the reason that the dermatitis varies greatly in degree, and the affection runs a tolerably definite course. Under any circumstances, a method of much value is to wash the affected parts immediately with soap



and hot water. This is to be done freely and for a considerable time. As a medicinal application I have found hourly mopping with sulphate of zinc lotion of the strength of from ʒj-ʒss to water Oj to be of much service. Black wash—calomel ʒj lime water Oj—is an excellent application used as a lotion upon linen for half an hour at a time. This should not be used over too extensive surfaces. A remedy of universal application is, according to White, made as follows :

R.	Zinci oxidi,	ʒiv.
	Acidi carbolici,	ʒj.
	Liq. calcis,	Oj. M.

S. Shake and mop over affected surface repeatedly, day and night.

Klotz has found ichthyol of much value.

### DERMATITIS CALORICA.

The effects on the skin of varying degrees of heat and cold are included under this head, as for example, sunburn, common burns and scalds, frostbites and chilblains. The clinical symptoms are very similar in these affections, whether the exciting agent be heat or cold, and there may be present all grades of disturbance from simple hyperæmia up to gangrene of the skin.

TREATMENT. The treatment of a burn of the first degree, namely, that condition in which there is redness, heat and swelling with considerable pain, followed by desquamation, should be of a soothing character. A saturated solution of sodium bicarbonate applied by means of cloths of suitable size is an excellent and convenient remedy. Later on, in the desquamative stage, a soothing ointment may be employed. In burns of the second degree, where blisters have formed, the contents of the blebs may be evacuated, taking care, however, to leave the roof of the blisters intact, as they form the best protection to the inflamed tissues beneath. The carron oil (equal parts of lime water and linseed oil), to which may be added one minim to the ounce of creasote, is probably the best local



application. In burns of the first degree Leistikow uses five parts zinc oxide, ten parts magnesium carbonate and from one to two parts ichthyol; in burns of the second degree he applies the following: Zinc oxide, five parts; prepared chalk, ten parts; starch, ten parts; linseed oil, ten parts; lime water, ten parts, and from one to three parts of ichthyol. Picric acid was originally recommended by Thierry, and has been much used of late. Keen advocates compresses soaked in the normal salt solution.

In inflammation of the skin, the result of cold, the patient should be placed in a cool room, and the affected parts should be restored to a normal temperature by being rubbed with snow, or else by the application of cold water. Sloughing and ulceration should be managed on antiseptic principles. As chilblains occur mostly in weakly children, tonics of bark and iron are usually indicated. Locally, stimulation is generally demanded. When the surface is unbroken, the affected region may be painted with tr. iodine or with the oil of peppermint pure, or diluted with glycerine (1-6). The itching is much abated by painting with Lin. Belladonnæ (B. P.) and allowing it to dry on. Kaposi recommends the following application:

R.	Pulv. camphoræ,	gr. x.
	Cretæ præparatæ,	ʒj.
	Olei lini,	ʒij.
	Balsam. Peruvian.,	℥xx. M.

Another prescription of much value, at least in giving temporary relief, contains menthol.

R.	Menthol.,	ʒij.
	Alcoholis,	q. s.
	Zinci oxidi,	ʒij.
	Pulv. calaminæ præp.,	ʒij.
	Glycerini,	ʒiv.
	Liq. calcis,	q. s. ad ʒiv. M.
S.	Mop on with rag.	

This prescription also often acts admirably in burns where the skin is unbroken.



**X-RAY DERMATITIS.**

Since the application of the X-Rays of Roentgen have come into general use a number of cases have been reported in which severe inflammation of the skin has occurred; in some cases deep ulceration has been observed. Shedding of the hair and nails has also been noted, sometimes with and at times without previous dermatitis. It has been stated that this form of inflammation is extremely rebellious to treatment, and I can testify from my own limited experience with these cases to the truth of this statement. Crocker states that no ill effects need be feared from the exposures usually required for an ordinary radiograph, but that the untoward results are only produced when the exposure is very long and the Crookes' tube is placed very close to the skin or when the exposure is frequently repeated. In a case of my own a young weakly girl with a spinal curvature was subjected to the operation at a public place, with the result of producing over the region of the sternum a large palm-sized area of ulceration, which was accompanied by deep periosteal pain.<sup>1</sup>

**VACCINAL ERUPTIONS.**

In connection with the vaccine disease in the human subject there will occasionally develop certain disturbances of the skin. These may be properly classified as: (*a*) local or direct, and (*b*) general or indirect.

**Direct or Local Disturbances.**

Aside from the normal effects of the vaccine inoculation, the so-called spurious vaccinia may assume any of the following appearances: (1) Red pea-sized tubercles may spring up at the site of the vaccination, which may or may not suppurate. Considerable ulceration may follow supuration. Sometimes indolent red nodules persist for a long period. (2) The vaccine vesicle may begin with marked itching, fail to umbilicate, and run through its

<sup>1</sup> See especially Gilchrist, Johns Hopkins Hosp. Bull., Feb., 1897.



course with great celerity, the scab separating by the tenth day. (3) A bleb followed by crusting and ulceration may take the place of the usual lesion. (4) On or about the third day after vaccination a crop of herpetic vesicles may develop; these soon rupture, the surrounding skin becomes indurated, and an eczema is set up. (5) Vesicles that have run a normal course up to the eighth or tenth day may rupture, giving rise to spreading ulcers accompanied by systemic reaction.

Considerable dermatitis may occur from local injury or other causes, usually superficial in character, but it may go on to phlegmonous inflammation and suppuration. Ulceration and gangrene of the pock itself may, rarely, happen. Vaccinal erysipelas is also a rare complication, and is due to external sources of infection, just as often happens to any other abraded surface when exposed to contagion. The accidental or careless inoculation of syphilis needs only to be mentioned. It is an event of rare occurrence, and wholly preventable. Morris states that contagious impetigo may be inoculated with the vaccine virus, become developed in the vesicles, and spread by auto-inoculation to all parts of the skin.

#### Indirect or General Disturbances.

Various acute eruptions may develop in the course of the vaccine disease, which are not, however, due to any uniform specific influence of the vaccine virus, but are of the nature of the skin affections that follow the ingestion of many drugs; in both cases inconstant as regards lesional expression, and presenting different features in different persons.

Individual idiosyncrasy is perhaps the chief factor in their production. In my experience, which has been tolerably extensive, vaccinal eruptions mostly appear after the eighth or ninth day, and consist mainly of erythematous, papular and papulo-vesicular rashes. According to my observation, the macula-form exanthem, both large and small, is the most frequent. Hebra describes the roseola



vaccina as coming out between the third and eighteenth day. Behrend states that there are two distinct periods for vaccinal eruptions—the first beginning on the second day and the second on the eighth day. As a matter of fact, while the erythematous type is the first in point of frequency, almost any form of cutaneous eruption—bul-  
lous, vesicular, urticarial, etc.—may, under certain ill-understood conditions, make its appearance. During one season, for example, I saw a considerable number of cases of erythema multiforme, but, strange to say, only after revaccinations. These manifestations are all insignificant and comparatively rare, but, under the title of vaccinia gangrænosa, Hutchinson, Stokes and others have reported gangrene of the skin as following vaccination. This condition, however, is in no way peculiar to vaccinia, but may happen in children after chicken-pox and other eruptive disorders.

In predisposed subjects vaccination may evoke a latent eczema or even a psoriasis, but eczema may occur just as well after any indifferent irritation, *e. g.*, piercing the ears, etc., and psoriasis may be aroused into activity after an attack of scarlatina.



## CLASS II.—HEMORRHAGES.

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### PURPURA.

PURPURA is characterized by the appearance in the skin of variously sized and shaped hemorrhagic lesions that do not fade on pressure. The cutaneous symptoms may be accompanied by bleeding from the mucous surfaces and extravasations into the viscera. According to the form, shape and other circumstances connected with the cutaneous hemorrhage, the resulting lesions have received certain special designations as follows:

When of the size of flea-bites or somewhat larger, they are called *petechiæ*; occurring in streaks, *vibices*; variously sized blotches are known as *ecchymoses*; and when the effusion produces tumefactions, *ecchymomata*.

In addition, hemorrhage associated with exudation into the skin gives rise to the purpuric papule and bulla. The so-called bloody sweat, or hæmatidrosis, is an anomaly of perspiration, being an effusion of blood into the sweat follicles or ducts.

It is a very difficult matter to give a succinct and scientifically accurate account of purpura, because our knowledge of the essential nature of the process is far from complete. For clinical purposes it will be found convenient to treat of the subject under the three following heads, viz., purpura simplex, purpura hæmorrhagica and purpura rheumatica.

#### Purpura Simplex.

This is the most trivial of the cutaneous hemorrhages. The general health is often apparently unaltered, although at times some degree of malaise may be experienced, with slight elevation of temperature. The eruption, so to



speak, may consist of any of the forms just mentioned, but is for the most part petechial in character, or occurs in bands, streaks or with a circinate arrangement (Duh-ring). Any part of the body may be attacked, but the lower limbs perhaps suffer oftenest. The lesions come out in successive crops, and the disorder may be prolonged for a considerable period in this way. Each hemorrhagic spot will last for a week or two, and will undergo the usual changes of color, *e. g.*, crimson, purple, blue, yellow, green, etc. The eruption itself occasions no discomfort.

#### **Purpura Hæmorrhagica.**

Hemorrhagic purpura (land scurvy, morbus maculosus Werlhofii) may be said to be a severe form of the simple variety, sometimes, in fact, developing out of it, and adding to its cutaneous features bleeding from the mucous outlets, and in some cases exhibiting extravasations into serous membranes and important viscera. It is usually unaccompanied by rise of temperature, and may develop suddenly ; or, on the other hand, it may be preceded for a short period by headache, loss of appetite, vague pains, lassitude, and other symptoms of indefinite ill-being. The hemorrhages into the skin are on a somewhat larger scale than in purpura simplex, and these will be accompanied, or preceded, by ecchymoses and free bleeding from the mucous membranes, the latter taking place from the nose, stomach, mouth, bowels, vagina and urethra.

Hemorrhage into the cranial cavity may cause a speedy death, and in the malignant cases the acute loss of blood will more or less rapidly lead to a fatal issue. In other instances the bleeding is more moderate and the patient is after a season restored to health, relapses, however, being not uncommon.

#### **Purpura Rheumatica.**

Rheumatic purpura, or peliosis rheumatica, was first described by Schœnlein in 1829. It is looked on by some as an independent affection, and is usually described along



with the other varieties of purpura; other excellent authorities classify it with exudative erythema, a view for which much may be claimed. It is retained here, however, on account of the clinical fact of hemorrhage into the skin, which is its most striking visible feature. It is comparatively rare, although twenty cases have come under my own observation.

The eruption is generally preceded by a varying degree of malaise, and the patient complains of pains in the joints of a rheumatic character, and on inspection the tissues about the joints are found to be somewhat œdematous and slightly tender. The hemorrhagic spots, generally petechiæ, appear in a day or two from the beginning of the affection, although in some instances this order is reversed, and the pains in the joints follow after the purpuric lesions. The usual situation of the eruption is on the lower extremities. I have sometimes seen it on the arms; but never on the trunk. The cutaneous hemorrhages undergo absorption in the course of time, presenting in the process of involution the various shades of yellow, green, blue, etc. The disorder may subside after one attack, but relapses are not uncommon, the disease being kept up in this way for a number of weeks or months. Among the rare complications may be mentioned bleeding from mucous membranes, albuminuria, valvular murmurs or the supervention of purpura hæmorrhagica (Scheby-Buch). Purpura rheumatica is said to occur in young people of both sexes, but especially in young women. Strange to state, I have never seen a case in a female. My patients have been males, varying in age from ten to sixty years, but mostly under thirty. There also exists a severer grade of arthritic purpura, in which the eruption is not limited to the lower limbs and the joint affections are more marked, and there are also pronounced gastro-intestinal symptoms, together with lesions of the throat. These may be present besides urticaria and œdema of the skin and multiform erythema.<sup>1</sup> Hænoch and Couty have directed attention to

<sup>1</sup>See Osler, Am. Jour. Med. Sci., Dec., 1895.



a form of purpura occurring chiefly in children, in which there are rheumatic pains, intestinal pain and vomiting, and the establishment of considerable œdema of the skin. I have seen several instances of this variety of purpura, but I have looked upon it as presenting nothing more than a purpura with gastro-intestinal complications due in all likelihood, as has been suggested, to local extravasation of blood. Purpura hæmorrhagica occurring in the newborn is called purpura neonatorum, and can hardly be said to differ from the same disease appearing in later life.

Sometimes in the course of ordinary purpura certain wheal-like and papular lesions develop, which go by the names, respectively, of *purpura urticans* and *purpura papulosa*, or *lichen lividus*. The attempt to erect these into independent varieties is unnecessary and confusing.

In addition to the forms of purpura considered above, and which have been regarded as idiopathic, there are a large number of cutaneous hemorrhages that are unequivocally secondary in character. Chief among these varieties are to be mentioned the severe and even malignant hemorrhages that complicate various infectious diseases, *e. g.*, variola, rubeola, scarlatina, etc., those due to debility or the changes incident to old age, extravasations of blood from local injury and the interesting class of cases where hemorrhage into the skin is due to the ingestion of certain drugs, especially iodide of potassium (Fournier, W. G. Smith).

In those instances in which cutaneous hemorrhage is only a secondary phenomenon an objective cause for the disorder may frequently be assumed. Such, for example, is the purpura that frequently accompanies the specific fevers and malaria;<sup>1</sup> or in cases where we may demonstrate some obstruction to the blood current, *e. g.*, valvular disease of the heart; or when, from some cause, an acquired or congenital weakness of the vessel walls may be supposed to exist, as in rickets, syphilis or hæmophilia.

<sup>1</sup> In a case of purpura hæmorrhagica recently under my care, examination of the blood by Dr. Fisch showed the plasmodium malarie.



In what may be called the essential purpuras the etiology is far from clear. That these various forms of purpura are of an infectious nature is more than probable. Petrone injected blood from patients affected with purpura into rabbits and succeeded in producing a general hemorrhagic state. Letzerich, in 1889, discovered a bacillus that, injected in pure cultures into the abdomens of rabbits, reproduced the original symptoms of the case from which it was taken, and from these in turn he obtained an identical micro-organism. In fact, as a result of several recent observations, it is likely that purpura may be due to a variety of micro-organisms. Certain purpuras are also probably of nervous origin, cases being recorded following shock, anger or other mental emotions. The etiological importance of rheumatism and influenza in purpura should also be remembered.

Unna is of the conviction that in almost all cases of cutaneous bleeding, both in purpuric diseases and in the intercurrent bleeding of other chronic and acute febrile processes, rupture of the vessels is really present, and that a distinct diapedesis is only present in a few special cases.<sup>1</sup>

**DIAGNOSIS.** The diagnosis of purpura is usually easy. Hemorrhage into the skin is distinguished from inflammatory lesions by the fact that the former cannot be effaced by pressure with the finger.

Purpura hæmorrhagica is distinguished from scurvy by the mode of its development, and the character of its symptoms. As pointed out by Liveing, scurvy does not as a rule appear in isolated cases, but among a large number of persons who have been simultaneously exposed to a similar dietetic régime. Scurvy is always ushered in with marked general symptoms, pains in the limbs, depression of spirits, etc., symptoms that are not necessarily present in purpura in the beginning; moreover, the swelling of the gums, state of the teeth and a tendency to ulceration seen in scurvy are absent in purpura.

**TREATMENT.** Mild cases of purpura require no partic-

<sup>1</sup> Histopathology of the Skin.



ular treatment ; indeed, in many instances beyond the fact of the cutaneous hemorrhage there are no indications presented for remedial measures of any sort. In peliosis rheumatica, as well as in other forms, rest in the horizontal posture is of the utmost importance. Among the drugs of most repute in purpura may be mentioned turpentine, acetate of lead, dilute sulphuric acid, ergot, quinine and gallic acid. Nitrate of silver has recently been recommended. A combination of ergot and iron has usually given me the best results in cases suitable for their administration. The local hemorrhages should be checked in the usual way, that is by astringents, tampons, pluggings, etc. In rheumatic types the salicylates may be administered, and pains in the joints combated by ichthyol or iodine salves, cotton compresses, etc. Constitutional symptoms should be treated on general principles. Tonics like quinine, strychnia and arsenic are indicated during convalescence. Iron is said to be contraindicated for fear of producing relapse, but it may be given later. According to Lockwood if profound anæmia should supervene warmth must be applied to the body, hot applications to the heart and opium administered in small, repeated doses. The same authority recommends under similar circumstances inhalations of pure oxygen gas, and rectal or hypodermic injections of a warm sterilized saline solution.

PROGNOSIS. A guarded prognosis is required in all cases of purpura, as the course and possible complications of even simple cases are not always easy to foretell. It must be said, however, that the simple forms usually terminate favorably, although perhaps interrupted by a number of relapses. Purpura hæmorrhagica will naturally occasion much anxiety, both on account of the possibility of a fatal issue, and also from the fact that cases finally ending in recovery may be prolonged by repeated relapses.



## CLASS III.—HYPERTROPHIES.

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### LENTIGO.

EPHELIDES, or popularly freckles, are small patches of pigment, of a yellowish, or even blackish color, and varying in size from a pin's head to a split pea. They affect mostly the face and backs of the hands, but are also to be found on the covered parts of the body. A similar condition is observed in an early stage of angioma pigmentosum et atrophicum, and also in aged people. Wilson speaks of congenital cases, but as a rule freckles do not develop until the child is of some age—six or seven years—and then continue more or less marked throughout life. Persons of blond complexion are more subject to freckles than those of darker skins. It is commonly believed that the sunlight, especially in summer, is the immediate exciting cause, and we know that freckles disappear, or at least notably fade in winter; but Hebra called attention to the fact that they also occur on those parts of the body not exposed to the sun's rays.

TREATMENT. Many remedies have been recommended for the temporary removal of freckles. The following ointment is one of the most successful:

R.	Hydrarg. ammoniati,	3j.
	Bismuthi subnitratis,	3j.
	Ung. aquæ rosæ,	3j. M.
S.	Apply at night.	

For the very black freckles I have found it a good plan to touch each one quite superficially with a stiff, fine needle, attached to the negative pole of a galvanic battery. The process may be called a species of tattooing, taking care, however, that the needle shall not go too deeply.



**CHLOASMA.**

The word chloasma was formerly used as synonymous with *tinea versicolor*, a parasitic affection, with which it has nothing in common. It is a diffuse form of excessive pigmentation as distinguished from the limited pigment deposits seen in freckles. This term has also been made to include the various grades of pigmentation resulting from heat, chemical irritants and scratching, as well as the symptomatic forms observed in connection with Addison's disease, cancer, etc. For practical purposes I shall treat only of the variety commonly called chloasma uterinum and sometimes liver spots. So far as the liver is concerned there is no ground whatever for acknowledging any causal connection between it and the discoloration in question, but it is quite true that during pregnancy and afterwards, as well as in women suffering from uterine derangements, dirty brown or yellowish pigment deposits are to be observed on the forehead, over the malar region, and not infrequently on the upper lip, and also at the angles of the mouth. It is not often noticed on the neck or trunk. The discoloration usually disappears in women after the menopause, and is never seen before the establishment of menstruation. This condition is known to the laity as "moth" or as the "mask" from its peculiar arrangement on the face.

**DIAGNOSIS.** Chloasma may be mistaken for leucoderma, in which the white spots are hyper-pigmented about their borders, but in chloasma there is a general discoloration and an entire absence of dead-white spots such as are seen in the former affection. *Tinea versicolor* is to be distinguished from chloasma by the fact that it never occurs in the face, but on the trunk and arms, and the spots are somewhat scaly or can be made so by slight scratching with a dull knife.

**TREATMENT.** The pigment spots of pregnancy generally disappear after delivery, although not always, and in cases of uterine disease appropriate measures for its relief must be instituted. The local treatment is of chief impor-



tance. Nightly frictions with ordinary green soap is very serviceable. Fox advises a good quality of peroxide of hydrogen painted on once or twice a day. Rohé recommends the following:

R. Bismuthi subnitratis,  
Hydrarg. ammoniati,                   āā ʒj.  
Vaselini,                                   ʒj. M.

S. Apply to the discolorations at bedtime, and wash off in the morning with the spiritus saponis kalinus.

The last-named preparation is a mixture of equal parts of green soap and alcohol, or, better still, Bagoë's prepared olive soap with cologne in the same proportions.

There are many other remedies that will produce exfoliation of the epidermis, and will rid the patient at least temporarily of the discoloration, but unless the causative disease is also removed, which is often impracticable, there will be a recurrence of the pigmentation. In all the textbooks Hebra's rapid method of removing chloasma with strong lotions of corrosive sublimate is referred to and recommended. I have seen the most mischievous results from this practice, and would earnestly warn against its adoption.

### ACANTHOSIS NIGRICANS.

Pollitzer and Janovsky,<sup>1</sup> and afterwards several other competent observers, have reported cases, agreeing in their main features, in which certain regions of the body, as, for example, the neck, mucous membrane of the mouth, parts of the trunk, axillæ, backs of the hands, fingers, ano-genital regions and thighs have been occupied by yellowish, grayish-brown to blackish patches. The pigmented areas were covered in some places by fine papillæ, some of which were discrete, while in other situations, such as the groin and axillæ, they were grouped and formed papillomatous, vegetating masses. There was no exfoliation from the surface, and no subjective symptoms are

<sup>1</sup>Internat. Atlas Rare Skin Dis., IV., 1890, II.



recorded. In one case the pigmentation disappeared spontaneously. In Crocker's case the hands and mucous membranes were exempt. I recall having seen many years ago, in a tuberculous young woman, a case apparently of the same nature in which the legs only were involved, the surfaces being ichthyotic and of a dark black color. Darier<sup>1</sup> reports a case in which the symptoms of gastric cancer were present, and calls attention to the fact that all the cases recorded seem to have been associated with malignant affections of the abdominal organs. He thinks this association may be explained either by auto-intoxication or by the action of the carcinoma upon the sympathetic system; the cutaneous dystrophy he attributes to the latter cause.<sup>2</sup>

### KERATOSIS PILARIS.

The disease known as keratosis, or lichen pilaris, is characterized by the presence of numerous, small, papular elevations seated about the mouths of the hair follicles. The disorder occurs almost exclusively on the outer surfaces of the arms and thighs, and is made up of small whitish or dirty looking papules often pierced by a hair; but sometimes when the horny accumulation has been picked out the hair may be seen coiled up under it. At times the papules are quite red, and here and there pustules may be observed. Usually the intervening skin is normal, but at times rough and scaly. Considerable pruritus is present in some cases. It is most common in the winter season.

Brocq divides keratosis pilaris into several varieties according to the color, intensity and location of the lesions. He also describes a keratosis pilaris of the face which terminates in interfollicular atrophy. This condition corresponds to the *ulerythema ophryogenes* of Taenzer.

<sup>1</sup> *Annales de Derm. et Syph.*, Feb., 1895.

<sup>2</sup> See abstract of recent literature in *Jour. Cutan. and Genito-urin. Dis.*, Dec., 1897, and article by Gaucher in the *Medical Week*, Sept. 3, 1897, English edition.



Unna says that in "lichen pilaris" we have to do with a chronic inflammation localized at the follicular exits, and the apparently non-inflammatory form has the same relation to the inflammatory form as pityriasis capitis has to seborrhœic eczema of the scalp.

People who are chary in the use of soap and water are the usual sufferers from keratosis pilaris; but it should be well understood that many perfectly cleanly persons develop this trouble after puberty, and that it is a common accompaniment of ichthyosis.

DIAGNOSIS. The disease somewhat resembles cutis anserina, or goose flesh, but the latter state is not permanent, disappearing when the cause is removed, and besides the papule cannot be dug out as is the case in keratosis pilaris. It is to be distinguished from the papular syphilide by its persistence without change in character, its development almost exclusively on the outer aspects of the limbs, and the absence of specific concomitants.

TREATMENT. In cases due to uncleanness vigorous use of soap and water will speedily effect a cure. In other instances the plan suggested for ichthyosis, viz., hot alkaline baths, or warm baths with green soap frictions, preceded and followed by inunctions of bland salves, will give the best results.

### KERATOSIS PALMARIS ET PLANTARIS.

Aside from the familiar callosities affecting the palmar and plantar surfaces, and due to external pressure, there are a considerable number of affections characterized by hypertrophy of the horny layer of those parts, although possessing a widely varied etiology.

The horny thickenings occurring in connection with eczema, psoriasis and syphilis are well recognized. Less common are the warty growths following the ingestion of arsenic and usually associated with hyperidrosis. The papules form first around the sweat orifices, but after a while the intervening spaces become involved and a general thickening takes place. The knuckles and finger joints



may be affected. The author, among others, has reported such a case.<sup>1</sup> Many cases of tylosis are congenital, and, as is shown in the published reports of Crocker, Unna and Dale, it may appear in several generations and attack several members of a family.

Under the name of *Keratoderma erythematosa symmetrica* Besnier<sup>2</sup> describes a case in which there was a symmetrical thickening of the horny layer, disposed in islets on the palmar surfaces of all the fingers and toes and on the prominences of the palms and soles. The skin between the hyperkeratotic lesions was healthy and was separated from the diseased parts by an erythematous zone of from five to six millimeters in breadth.

The thickened plates were cracked and fissured from natural causes, and were consequently somewhat painful; otherwise there were no subjective symptoms. The condition was incurable. Besnier says that we may provisionally separate from the groups of palmar and plantar keratosis, and from ichthyosis, the four following types of keratoderma:

(a) The symmetrical congenital and hereditary keratoderma of the extremities. (b) The symmetrical keratoderma of the extremities that develops in childhood, which is erythematous and irritable, and may be connected with some neurosis. (c) The symmetrical keratoderma of the extremities, especially of the feet, which develops in isolated foci and spreads on the sole of the foot out of proportion to the degree of pressure, and which is certainly of central origin. (d) The accidental keratoderma occurring at any age, produced under the influence of unusual work, distinct, however, from callosities, properly so-called.

As an erythema keratodes, Brooke<sup>3</sup> has described a defined, chronic erythema of the palms and soles which is followed by a superficial hyperkeratosis, associated with tenderness and œdema. It recovers readily under treat-

<sup>1</sup> Brit. Jour. Derm., Oct., 1893.

<sup>2</sup> Internat. Atlas Rare Skin Dis., Pl. V., Fig. 1.

<sup>3</sup> Brit. Jour. Derm., Nov., 1891.



ment, but is prone to relapse. The treatment of the marked cases of tylosis is that of callus.

### KERATO-ANGIOMA.

This rare disorder, first described by Cottle and more fully by Mibelli, occurs usually on the hands and feet of young persons, the subjects of chilblains, and consists of warty growths that are developed over dilated vessels. The usual situations of the disorder are the dorsal surfaces of the fingers and toes, but, exceptionally, other localities may be invaded. Fordyce reports a case in which the scrotum was the seat of the affection, and William Anderson gives an account of a patient on whom the disease was widely distributed over the body and scarcely at all on the hands and feet ; besides there was no tendency to chilblains or disturbances of the circulation. The lesions are minute, red or violet spots, which may be made to disappear under pressure. Among them, in the course of time, are to be noted larger capillary varices, which can be made to pale by pressure, but from which the blood cannot be entirely emptied. The superimposed horny layer becomes thicker, but retains its transparency, showing the vascularity beneath, and the lesions have otherwise the appearance of an ordinary wart. These angiokeratomata are sometimes discrete and sometimes arranged in clusters. The telangiectasis is due to recurring dilatation of the small blood vessels, while the warty formation is a secondary process, or, as Unna puts it, a stagnatory dermatosis on an angio-neurotic basis. The treatment is by electrolysis.

### POROKERATOSIS.

This rare disorder is a non-inflammatory hypertrophy of the epithelial structures of the skin that begins as warty or callous spots of different sizes and shapes, which presently become depressed in the center, while slowly spreading at the periphery, until there results a serpiginous seam or "dike," enclosing areas of varying extent. The ridge or seam may be continuous for considerable distances, or it



may be interrupted in places, and also sometimes exhibiting conical elevations along the crest. The enclosed areas may be atrophic and hairless or else of normal appearance. The surface of some of the enclosed spaces is at times covered with scattered horny bodies. In Hutchins' case there was occasional itching, especially upon exposure to the sun. On the face and other parts there may appear imperfectly developed patches in the shape of dry, horny discs from a few meters to three centimeters in size, exhibiting telangiectases and a border of loosened epidermis. The usual sites of predilection are the backs of the hands and feet, then the rest of the extremities, the face, neck and scalp. It spreads with extreme slowness, in many instances remaining in the same situation for years. The disorder usually begins between the second and eighth years, but a later development at twenty-six has been observed.

Porokeratosis is a family disease, that is, it appears in parents and offspring, brothers and sisters. Gilchrist's cases, eleven in number, occurred in four generations of one family.

### CALLOSITAS.

Callosities are thickenings of the epidermis which may be congenital, but are usually acquired as the result of local irritation. The most frequent sites for callosities are the palms and soles. They are generally the result of pressure sustained in the occupation of the affected person. The skin is usually thickened over some bony prominence, as the metacarpo-phalangeal joints. The lesions of callositas are of various sizes, rounded in outline, slightly raised above the general level, yellowish or brownish in color and hard to the touch. The entire alteration occurs in the horny layer of the epidermis.

In the cases where a moderate amount of callous epidermis has been produced by the occupation of the patient it is unnecessary to remove it, as it acts as a protection to the tender layers beneath. In any case, to cure the condition, it will be necessary first to remove the cause, which



may entail cessation from the ordinary occupation. As much as possible of the horny layer, after soaking in hot water, should be pared off with a knife. Salicylic acid in the form of Unna's plaster mull will loosen the remaining epidermis and render its entire removal possible.

### CLAVUS.

A clavus or corn is a circumscribed thickening of the epidermis which grows in depth as well as superficially. Corns are most often found where pressure occurs on the toes. Corns are hard or soft, according to whether they are in a situation where they are dry or moist. Hard corns occur mostly on the outer side of the little toe and upon the tops of the toes, while soft corns are most common between the toes.

Anatomically, a corn consists of a conical thickening of the epidermis, from the under surface of which a peg of epithelium extends downward and causes, by its pressure, atrophy of the underlying papillæ. A corn may become acutely inflamed and suppurate, leaving a painful ulcer.

In the treatment of corns the first thing is to remove all injurious pressure from ill-fitting shoes. The thickened epidermis should then be removed, after soaking in hot water, with a sharp knife. Another way to effect the removal of the corn is to apply salicylic acid, either in the form of a plaster or in collodion, a drachm to the ounce. The corn should then be neatly strapped with rubber plaster or a felt ring may be worn over it. The soft corn should be removed as above recommended, and the base touched with some mild caustic; after this the feet should be washed every day with soap and water, and bits of absorbent cotton pushed in between the toes to keep them apart.

### CORNU CUTANEUM.

Cutaneous horns are essentially agglutinated warts (Kaposi). They may appear in any region, but are commonest about the face, scalp and penis. They may de-



velop from sebaceous cysts, warts or scars. They vary in size from one to several inches, and often bear a close resemblance to the same outgrowth in animals. Sometimes a cancerous degeneration takes place in cutaneous horns. After the excrescence has been removed by knife, scissors or electrolysis, it is necessary to cauterize the base to prevent recurrence.

### VERRUCA.

The verruca, or wart, has been divided into several clinical varieties depending upon its form or other features, namely: *Verruca vulgaris*, *verruca digitata*, *verruca plana*, *verruca filiformis*, *verruca acuminata*, etc. Warts may occur singly or in numbers; they may be discrete or confluent; and, as will be presently noted, they may have a variety of shapes and sizes, and vary considerably in consistency and other physical characters. Warts are most frequently seen on the hands, face, neck and genital region.

#### *Verruca Vulgaris.*

The common wart is usually met with upon the hands and fingers, especially of children, and varies in size from a pin-head to a three-cent piece. They are elevated, of a brownish, grayish or blackish color, with a smooth or rough, often papillated, surface. There may be only one or two present, or the parts may be literally sown with them.

Kühnemann<sup>1</sup> believes that the common wart represents an independent disease of the epidermis, consisting, in addition to hypertrophy of the whole of this structure, in an atypical cornification.

#### *Verruca Digitata.*

This form of wart is usually seated on the scalp. Warts are generally sessile, but in this variety the growth is pedunculated and, as indicated by the name, there are finger-like projections that give the wart its peculiar appearance.

<sup>1</sup> Monatsheft f. prakt. Derm., Bd. VIII., Nr. 8, 1888.



**Verruca Filiformis.**

These thread-like or filamentous offshoots from the skin, popularly called soft warts, are mostly seen on the necks of elderly persons. This verruca acrochordon is considered by some writers merely as a stage of the fibromatous process.

**Verruca Senilis.**

These localized hypertrophies appear as flat, dry, freckle-like collections of scales, occurring mostly on the backs of the hands and upper part of the face. They may also be found on the trunk, forearms and feet. When fully developed they attain considerable height—perhaps the one-eighth of an inch, and consist of blackish cornified scales, which, when removed, reveal a slightly bleeding surface.

The patch is often greasy to the touch. This condition constitutes the seborrhœic wart of Unna and Pollitzer.<sup>1</sup>

This affection gains considerably in importance when we remember the frequency with which keratosis senilis undergoes malignant transformation, being often in fact the starting point for epithelioma.

**Verruca Acuminata.**

The pointed wart, or pointed condyloma, also called venereal wart and cock's-comb vegetation, is mostly developed about the genital and anal regions of both sexes, although they may spring up under favorable conditions in other situations. These excrescences are very vascular, of a reddish, pinkish or venous color, sessile or pedunculated, and assume various shapes and sizes. They may be moist or dry, according to situation, and in certain regions favorable to their occurrence the odor arising from them is very offensive.

The etiology of the wart is not well understood. The ordinary verruca vulgaris comes and goes in a very mysterious way at times, and this peculiar behavior has given

<sup>1</sup> Brit. Jour. Derm., July, 1890.



occasion for quite a number of theories. It is quite certain that warts are most frequently seen on children and on exposed parts of the body, so that the theory of contagion is not without interest, and the conviction that they are of bacterial origin is not unreasonable.

Kühnemann<sup>1</sup> upholds the doctrine of the bacterial nature of warts, and finds in this fact a satisfactory explanation of their anatomical and clinical peculiarities.

The pointed condyloma is induced by irritating discharges, especially in persons who have suffered from gonorrhœa, although other acrid secretions are perhaps equally responsible.

**TREATMENT.** Colrat claims that sulphate of magnesium given for some time in doses of thirty grains three times a day for adults will cure warts. A great many methods for the local treatment of warts have been advised. The best local treatment is, I believe, by electrolysis, and it is to be remarked that the electrolyzation need not go on to complete destruction, but that often merely transfixing the wart with the needle is sufficient. In young children, who will not submit to the slight pain of this operation, painting the wart with a saturated solution of salicylic acid in alcohol will generally suffice. The salicylic acid in traumaticine or collodion (R. Acid. salicylic., 5ss; ext. cannabis indicæ, gr. v.; collodii ʒj. M.) or in the form of Beiersdorf's plaster is still more effectual. The various caustic applications, such as the acid nitrate of mercury, caustic potash and the nitric and chromic and trichloroacetic acids, may also be employed for destructive purposes, but the methods already mentioned are safer and better. In case, however, it is determined to use a caustic, the skin surrounding the wart should be thoroughly protected from injury by a ring of wax, and the remedy cautiously applied by means of an appropriate applicator.

Acuminate warts, or vegetations, should be washed with some disinfecting lotion, such as a solution of permanganate

<sup>1</sup> Monatsheft f. prakt. Derm., Bd. IX., Nr. 1, 1889.



of potassium or dilute liquor sodæ chloratæ, then thoroughly dried, and afterwards dusted with boric acid, resorcin, calomel, or oxide of zinc and lycopodium in equal parts. In some cases the galvano-cautery offers the speediest and best method of treatment.

The treatment of the so-called seborrhœal wart is usually simple. The crusts should be removed by inunctions with vaseline or lanoline, or by frictions with green soap, and then the following paste should be applied, as suggested by Rohé:

R.	Acidi salicylici,	gr. x-xxx.
	Sulphuris præcipitati,	℥ss.
	Pulv. amyli,	℥ss.
	Ung. aquæ rosæ,	℥j. M.

In obstinate cases the salicylic acid plaster mull acts well. If epitheliomatous change is suspected, the suspicious patch may be first electrolyzed, and then curetted, or else excised at once.

In other instances pyrogallie acid, twenty-five per cent. strength, in plaster form or resorcin plaster acts equally well. Trichloracetic acid is also valuable after curetting.

### PAPILLOMA.

Under the general designation of papilloma cutis writers on dermatology have described the most diverse forms of cutaneous disease, widely differing in their etiological and clinical significance, although possessing certain broad anatomical features in common. In a paper<sup>1</sup> written some years ago I made an effort to clear up the confusion then existing in regard to this subject, and, for purposes of clinical convenience, made the following provisional classification: 1. Verrucous papilloma, or common wart. 2. Carcinomatous papilloma, or papillary epithelioma. 3. Neuropathic papilloma, or the nerve nævus, nævus unius lateris, papilloma neuroticum and ichthyosis hystrix congenita of various authors. 4. Zymotic papilloma, or

<sup>1</sup> Archives of Dermatology, Oct., 1880.



yaws. 5. Symptomatic papilloma, or the large class of cases of lupus, syphilis, eczema, sycosis, etc., in which secondary papillary hypertrophy occurs. Under this head, for example, are the cases reported by Weil, Roser, Charpy and others. 6. Local idiopathic papilloma, or the dermatitis papillomatosa capillitii of Kaposi. 7. General idiopathic papilloma. To this division I assigned those examples of general papillomatous growths that are apparently primary, and clinically characterized by the eruption of variously sized and situated fungous excrescences, whose etiological relationships are as yet undetermined.

As just stated, the foregoing illustrations of so-called papilloma are in no sense substantive affections, and merely represent certain anatomical accidents grafted upon pre-existing morbid conditions.

With the advance of knowledge the necessity for any classification of the so-called papillomata no longer exists, since the nature of the process and its connection with other affections are at present well recognized. Still there remain, perhaps, certain cases in which the papillomatous lesions are the essential features present. Such a case may be found quoted at length in the paper to which I have just referred, and which was given in a former edition of this work.

### NÆVUS PIGMENTOSUS.

A pigmented nævus, or mole, is a deposit of pigment in the skin. A mole may consist of a circumscribed hyper-pigmentation only, or alterations in other elements of the skin may be present. These anatomical differences have given rise to various names, such as nævus spilus, where hyper-pigmentation alone is present; nævus verrucosus, when the surface is rough and warty; nævus pilosus, when there are hairs growing from the mole. When a mole is loose, flabby and contains fatty tissue it is spoken of as nævus lipomatodes.

Pigmented nævi are most common on the face, neck and back. They are usually under half an inch in diam-



eter, but cases have been reported in which large areas, as the region covered by bathing trousers, have been involved. A number of *nævi* are sometimes arranged along the course of a nerve; this is found only upon one side of the body, and has therefore been called *nævus unius lateris*.

Moles are nearly always congenital, though no doubt some appear in later life. They generally grow as the body grows, but cases are on record in which the border has extended beyond this proportion.

One of the most important facts connected with moles is that in late life, if irritated, they not uncommonly form the starting point for malignant growths.

Electrolysis is the best method of removing moles when small. The writer has recently succeeded in removing by this method a verrucous mole two inches in diameter with hardly a perceptible scar. If hairs are present they should first be removed, and, after sufficient time has elapsed to note the result, the mole itself may be dealt with. Very extensive growths are most readily and speedily removed by the knife when their situation permits of such treatment.

Trichloroacetic acid, pure, or more or less diluted according to circumstances, is an excellent application to moles, especially in children who would not tolerate electrolysis without an anæsthetic. It should be applied quite superficially and in a tentative way at first.

## ICHTHYOSIS.

This affection, popularly known as the fish-skin disease, may be regarded as of congenital origin, and is characterized by general scaliness and unusual dryness of the surface, and the development of plates and warty growths. There are two principal varieties of the disorder, namely, *ichthyosis simplex* and *ichthyosis hystrix*.

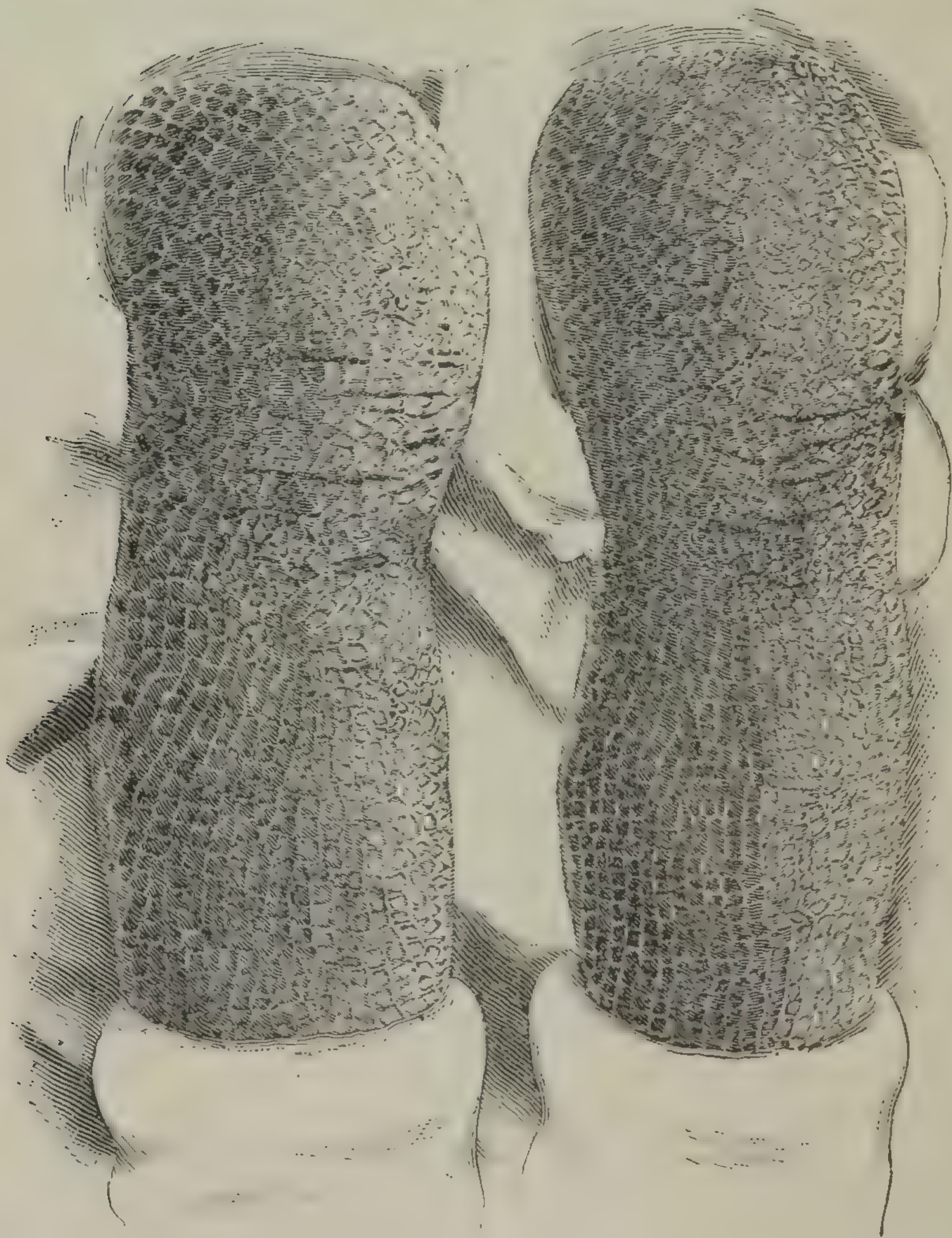
### *Ichthyosis Simplex.*

This variety of *ichthyosis* affects the surface generally, but is most developed on the extensor aspects of the limbs.



In many cases there is present simply an unusual dryness and roughness of the skin. This condition has been called xeroderma, which, however, is not to be confounded with

FIG. 4.



Ichthyosis Simplex of Legs (Taylor).

the malignant xeroderma of Hebra. Associated with this thickened and scaly state of the epidermis there is always present more or less of a papular eruption due to accumulation of horny cells in the hair follicles, keratosis pilaris.



In a severer grade of ichthyosis the skin is rough, thickened, fissured and scaly. The plates of skin are usually diamond shaped, bearing a close resemblance to the markings observed upon the hide of the alligator; but the physical characters of the scales will differ somewhat according to the locality involved, etc. The scaling sometimes occurs in thin, papery flakes, or it may be thick and horny.

The thin portions of the skin, face, palms, scalp, soles and flexor surfaces generally are but little affected, but the hair is apt to be harsh and lustreless, and the nails, rough, pitted and easily fractured. There is almost complete absence of perspiration, and the sebaceous secretion is deficient and altered.

In cases of any severity the scales assume an olive green or blackish hue (*I. nigricans*) which is due to accumulation of dirt, and also, according to some writers, to a deposit of pigment. Itching is sometimes present in a mild degree, and the deep cracks in the skin may occasionally be very painful. Owing to the increased activity of the glands in summer, and the consequent softening and shedding of the epidermal accumulations, ichthyotic patients improve greatly at this season, and the lighter forms of the disorder may even entirely disappear. The general health is not appreciably affected.

### Ichthyosis Hystrix.

By some writers ichthyosis hystrix is considered an independent affection. The disorder is not generalized but is found in localized, rough, bark-like, more or less projecting, yellowish, brownish or greenish patches of skin, characterized by extreme hypertrophy of the papillæ. The rest of the skin of the body is usually normal, although at times somewhat rough and scaly. One or more localities may be invaded, or the process may be limited to a single region.

The papillary hypertrophy is so great sometimes as to present the appearance of porcupine quills. The so-called



neuropathic papilloma, *nævus unius lateris*, of which I have reported a marked example,<sup>1</sup> was formerly considered as illustrating this condition.

Sometimes the skin is evidently ichthyotic at birth, or the condition is to be observed in children prematurely delivered. The whole body is covered with plates of fatty epidermis of different sizes, which are separated one from the other by deep or superficial furrows. Various deformities of lips, auricles, etc., exist. These cases constitute the Harlequin fœtus of English writers. If these children are born alive they succumb in a few days. This condition is regarded by Hebra and Kaposi as a universal *seborrhœa* (q. v.).

According to some authorities, in a certain other class of cases the ichthyosis is limited to the palms and soles, these parts being covered with thickened epidermic plates, exfoliating to a moderate degree and exhibiting some fissuring. Distinct horny excrescences have also been observed. These abnormalities have been noted in successive generations of a family. It is quite evident that this affection corresponds to the condition usually recognized as *keratosis of the palms and soles* (q. v.).

Although in some of the severest cases the ichthyotic deformity of the skin is conspicuous at birth, in most instances some months, or even a couple of years, may elapse before it is well developed. In my experience it increases in severity up to the age of puberty, and afterwards, except that it is better in summer, there is but little change.

Ichthyosis is said to be endemic in certain regions (Hirsch), but heredity, operating in small communities, will more satisfactorily explain such cases.

Anatomically, there is found in ichthyosis thickening of the epidermis and papillary hypertrophy.

ETIOLOGY. Ichthyosis is a congenital or hereditary disease, or more properly speaking, deformity of the skin, and

<sup>1</sup> *Archiv. Dermatol.*, Oct., 1880. See also Morrow, *N. Y. Med. Jour.*, Jan. 1, 1898, with illustration.



is seen in both sexes perhaps equally, although I have personally seen more females afflicted with it. Sometimes hereditary influence is not apparent. Unna expressly excludes from consideration in this connection *I. foetalis*, *I. palmaris* in all its forms, *nævi lineares* and *lichen pilaris*. He declares that true ichthyosis is an infectious hyperkeratosis tending to parakeratosis and is equally distinct from the congenital dermatoses and the neuropathic keratodermiæ.

**DIAGNOSIS.** The diagnosis of the disease is without difficulty, especially if trouble is taken to secure the history of the case. Perhaps it would be well to bear in mind in this connection the features presented in psoriasis, seborrhœa and lichen ruber.

**TREATMENT.** Within the last few years I have been in the habit of administering two or three of Garrod's sulphur tablets a day in some mild cases of ichthyosis or xerosis, and it has seemed to me that the result was good. I should mention, however, that there was carried on a simultaneous local treatment. David Walsh has prescribed with benefit a tablet containing five grains thyroid extract and one-tenth grain nitrate of pilocarpine. In mild cases the free use of simple warm baths, followed by inunction of glycerine or lanoline diluted with cold cream, will keep the skin tolerably smooth and pliant. Vapor baths are also helpful. In cases of greater severity it is advisable to render the baths alkaline by the addition of eight or ten ounces of carbonate of soda. Duhring and Stelwagon recommend that some mild ointment be first rubbed in and allowed to remain on a few hours, and then followed with a hot bath and green soap washing, which in turn is to be rinsed off with simple warm or hot water, and then again the surfaces are to be anointed with the salve. The following preparations are recommended:

R.	Adipis benzoati,	℥j.
	Glycerini,	℥xl.
	Vaselini,	℥ss. M.
S.	Apply after bathing.	



R.	Potassii iodidi,	℥j.
	Glycerini,	3j.
	Adipis benzoati,	
	Olei bubuli,	āā ʒss. M.
S.	Apply once daily.	

This latter preparation is highly commended by various authorities. Naphthol in five per cent. ointment, together with the use of naphthol soap, is regarded favorably by Kaposi. Andeer has used a three per cent. resorcin salve with asserted success. Sulphur of the strength of a drachm to the ounce of lard or vaseline has recently been brought forward. It is also recommended to impregnate the garments with its fumes every few days. A scruple of salicylic acid to two drachms of oil of sweet almonds and six drachms of lanoline is also valuable in conjunction with warm alkaline baths.

The horny and warty growths of ichthyosis hystrix, if of large size and inconvenient from their position, may be removed by the knife or galvano-cautery; the smaller patches may be treated by the application of the salicylic acid plaster mull, or by painting on a solution of the same drug, dissolved either in alcohol or traumaticine, of the strength of a drachm to the ounce.

PROGNOSIS. Ichthyosis is an incurable disorder, but by persistently bathing and anointing the skin the patient may be kept tolerably comfortable. Temporary disappearance of the ichthyosis has been sometimes noted after severe illness; and Hebra reports two permanent cures, in one case after an attack of measles and in another following small-pox.

### SCLEREMA NEONATORUM.

Sclerema of the newborn is an exceedingly rare affection, and is seen for the most part among the children of the poor. It is said to be more frequent in the winter months. The disease manifests itself as an induration and stiffening of the skin in newborn infants. The disorder may be present at birth, but in this case the chil-



dren are usually stillborn. As a rule sclerema develops in the first few days of life, but Money has reported some late chronic cases with paralysis. Kaposi says that it usually attacks children in the first months of life, more rarely those of one or two years of age. The skin of the lower extremities is first affected, and later successive portions of the integument until the whole surface is involved. At times the induration begins in the cheeks and spreads downwards. In the beginning the skin is of a waxy appearance, and feels thick when pinched up; later it has a livid hue, becomes adherent and can no longer be rolled between the fingers. After the disorder has become fully established, the body is rigid, with only such movement as arises from the shallow breathing, the joints are fixed, the child is unable to nurse and the whole body is so stiff that it can be held out horizontally by the legs. The respirations are slow and superficial and the pulse falls to 60 or below. The temperature is also subnormal, and in a few days life is extinguished.

Up to Parrot's time sclerema neonatorum was confused with œdema of the newborn. Parrot makes the essence of the disease a desiccation of the skin, but he says that there is no true sclerosis. Langer attributes the stiffness of the integument to solidification of the fat, due to reduced temperature. Various depressing conditions, such as congenital cardiac disorders, diarrhœa, bronchitis, exposure to cold, malnutrition, etc., act as predisposing causes.

Sclerema neonatorum is to be distinguished from œdema by the fact that in the former disease the skin is indurated and unyielding, while in the latter it pits on pressure and the swelling is most marked in dependent parts. True scleroderma does not occur in such young children as are affected by sclerema neonatorum, besides presenting other points of difference (q. v.).

TREATMENT. The treatment should be directed to bringing the temperature up to the normal, and to this end the child should be wrapped in cotton, or, if practicable, put in an incubator. Nourishment and stimulation



should be administered by the rectum, or by feeding with a catheter. Money reports two cases of recovery under the use of inunctions with mercurial ointment, and Garrod<sup>1</sup> has had a similar experience.

### ŒDEMA NEONATORUM.

This affection was formerly confused with sclerema, but the distinction between them was first clearly made by Parrot in 1877. It begins within the first three days of life. The œdema spreads from the lower limbs upwards, affecting the hands and genitals. The skin is pale or livid and pits upon pressure. The child may recover from this condition, but in other cases the œdema may become general, the skin red or darkish yellow and very hard to the touch, respiration becomes difficult, pulse weak and the child succumbs to some pulmonary, intestinal or cerebral complication. It is difficult to differentiate this malady from sclerema neonatorum, but in the latter affection the disorder is more general, the skin is harder, the joints are stiff, and the tendency is to affect, especially in the beginning, the dependent parts of the body.

The TREATMENT consists in raising the body temperature by artificial means, frictions from below upwards and proper feeding.

### SCLERODERMA.

Clinically this affection is characterized by a hardening or rigidity of the skin. The circumscribed form occurring in bands, patches or lines is called morphœa (q. v.). In the diffuse form a considerable portion, or even the entire surface of the body, may be involved. The affection is rare. It may make its appearance in any region, but, nevertheless, has a decided preference for the upper portion of the body, beginning usually on the chest, neck, shoulders or arms, and then slowly or rapidly invading contiguous parts. It has a tendency to spread over extensive areas and is usually symmetrical, affecting both arms

<sup>1</sup> Lancet, May 4, 1895.



or legs, though, perhaps, not in the same degree. The attack may be preceded by pain in the joints, a chill, œdema or abnormal sensations in the part, but frequently it comes on unheralded and insidiously, and the patient only becomes aware of the change when the induration is already marked and the pliability of the integument destroyed or, at least, seriously impaired. When fully developed, the skin is tense, infiltrated, hard, and to the touch gives the impression of a frozen cadaver without the feeling of coldness. It does not pit on pressure, and cannot be pinched up into folds, or moved over the deeper structures, to which it seems firmly adherent. The affected area is, as a rule, neither elevated above nor depressed below the level of the normal skin, though the former condition may be present in the beginning, and the latter in the later stages of the disease.

The infiltration merges gradually into the surrounding tissue and its boundary is consequently ill-defined. Its surface may be smooth and shining, the natural markings being obliterated, or more or less scaly, and in small areas, especially on the legs, may take on an ichthyotic character. In color it may be white or waxy, but is, as a rule, more or less pigmented. This may be diffuse, of a light to dark brown hue, or else in the form of irregularly sized and shaped patches, giving it a mottled or speckled appearance. The temperature may be normal or even slightly increased, but usually is somewhat ( $1^{\circ}$ – $2^{\circ}$ ) lower than that of the healthy skin. Sensibility is generally unaltered, but has been found both increased and diminished. The sebaceous and sweat glands are not markedly affected in the earlier stages, but later their secretion is diminished. The rigidity of the integument seriously limits or suspends movement of the diseased surface. In the face the features are rigid, immobile and expressionless, as though cut in stone. The lips are contracted, the mouth narrowed and the eyelids can hardly be closed. If the neck is involved, the head cannot be turned at all, or only to a limited degree. Attacking the chest or abdomen, respiration is interfered



with and the mammæ flattened. The extremities become fixed in a more or less flexed position, and the joints pseudo-anchylosed, their immobility being due not to bony union, but to contraction of their integumentary covering.

The mucous membranes are by no means exempt, and the tongue, gums, soft palate, pharynx, larynx and even the vagina and cervix may become the seat of the induration. Nor does the presence of scleroderma prohibit the occurrence of other diseases. Erysipelas, variola, eczema, acne and herpes zoster have been observed upon sclerodermic areas. Subcutaneous nodules, that disappear spontaneously, have occasionally been noted over bones.

Having, after the lapse of weeks, months or years, reached its acme, the affection may remain quiescent for a variable length of time, or it may gradually undergo spontaneous involution. The infiltration slowly disappears, the cutis regains its softness and elasticity and the joints their mobility. Frequently, however, the sclerotic skin becomes atrophic. It is then thin, parchment-like, exceedingly tense, white or irregularly pigmented. The contraction and constriction produce atrophy of the subcutaneous fat, fasciæ and muscles and the integument becomes firmly adherent to the bone, so that, literally speaking, the part seems made up solely of skin and bone. The nutrition is seriously disturbed and ulceration and gangrene may occur, especially over bony points. Affecting the hand, it forms that condition to which Ball has given the name of "sclerodactylie." Having reached this stage complete restoration is impossible. It is, indeed, capable of slight improvement, the induration may entirely disappear, but the cutis can never regain its normal texture nor the joints their mobility.

Pain on pressure is exquisitely felt, but the subjective symptoms are, as a rule, insignificant. A feeling of constriction and tension is naturally always present, and, occasionally, numbness, tingling, burning or deep-seated pains are complained of, though they usually give rise to but little trouble. Pruritus is more frequent.



The general health is not affected in the earlier stages and may remain good for years, but eventually, in the bad cases, the patient becomes depressed, emaciated, a state of marasmus supervenes, which, sooner or later, terminates in death. Crocker states that in certain cases a stiff œdema instead of induration is first noted, which after lasting weeks or months becomes absorbed, the skin shrinks, and the atrophic form is developed. He thinks that it is doubtful if those cases that are primarily hard and infiltrated ever become atrophic.

Children even as young as thirteen months old are also apt to be attacked by scleroderma, but it is said to run a more acute course with them and offer a better prognosis. Endocarditis and pericarditis, as in the adult, may occur as complications.

The etiology of scleroderma is obscure. It is more than probable that the tegumentary changes are due to disorder of the nervous system, to use a somewhat vague expression. Among the immediate exciting or predisposing factors that have seemed to play a part in the production of scleroderma may be mentioned exposure to extremes of temperature, rheumatism, erysipelas, mental emotion, etc., while, on the other hand, cases have developed without any appreciable exciting influence. The disease is commoner in women than in men and, although met with at the extremes of life, is more prevalent in persons of early adult or middle life.

**DIAGNOSIS.** The diagnosis presents few difficulties. Although closely allied etiologically and anatomically with morphœa, the clinical differences are marked. (See Morphœa.) In a case of lenticular cancer, cancer en cuirasse, that I recently saw with Dr. H. Tuholske of this city, the differential diagnosis was at first very difficult; but the pain, the involvement of the glands and the progressive emaciation of the patient—a woman—finally demonstrated the cancerous nature of the affection.<sup>1</sup> Osler<sup>2</sup> calls at-

<sup>1</sup> Crocker in his excellent work calls attention to the difficulties of diagnosis in these cases.

<sup>2</sup> Jour. Cutan. and Genito-urin. Dis., Feb.-Mch., 1893.



tention to the necessity of differentiating scleroderma from brawny, solid œdema, from scorbutic sclerosis, from myx-œdema and Raynaud's disease, and finally, since hyper-pigmentation is a marked symptom in many cases of scleroderma, it should not be confounded with Addison's disease.

**TREATMENT.** The treatment is unsatisfactory. Particular attention should be paid to improving the general nutrition of the patient and to diet and general hygienic measures. Phillipson reports two cases of generalized scleroderma in which a cure was effected by the administration of salol in doses of from one to four grains daily. This is in keeping with Graham's suggestion of the value of anti-rheumatic remedies in the disease. Very naturally thyroid extract, or thyroidin, might be tried in suitable cases, but it would seem that Osler's personal experience is not in its favor, although he states that it may be tried without harm to the patient.

Locally, electricity and stimulation by shampooing and massage have been recommended.

**PROGNOSIS.** On the whole the prognosis may be declared to be uncertain. Some cases recover spontaneously in months or years, while again the disease may persist indefinitely, or end in marasmus and death.

### MORPHŒA.

This peculiar affection is sometimes also called the Keloid of Addison. In the more usual form of the disease the lesions are present in the skin as variously sized, round, oval or irregular patches having well-defined margins surrounded by a lilac border made up of minute capillaries. The appearance of the morphœa patch is so characteristic that once seen it is not readily forgotten. The comparison of the general appearance of the lesion to a plaque of old ivory set in the skin is very happy, although at times the color is pinkish or perhaps of various shades of brown, yellow, purple or black. In a case at present under my care the disease is noted as running down the extensor



surface of the forearm to the little finger, and various shades of light brown, yellow and dark brown are present. The surface of a patch is generally smooth or slightly wrinkled, and in the beginning may be slightly elevated above the surface, level with it, or later somewhat sunken. The edges are usually occupied by small dilated vessels, forming a quite characteristic pink or lilac border. The disease is as a rule unsymmetrical, and is most frequently observed on the breasts, or anywhere on the trunk, the face, neck and the upper and lower limbs. A certain amount of pain is present in some cases, but often this is absent. Slight or even marked itching may be a symptom.

Sometimes there is only one patch to be noted, but in other cases there may be a number present. The center of a patch may be more or less insensitive. After a variable duration—months or years—the disease may undergo involution, leaving the integument perfectly normal, while in other instances contraction and deformity with wasting and general atrophy, especially of the limbs, may result. Morphœa may assume other features than those just mentioned. The disease may occur in bands, streaks and atrophic pits. Unna describes a card-like and keloid-like form. Elliot<sup>1</sup> records a case of morphœa which originated in a patient suffering from progressive muscular atrophy, and Morrow<sup>2</sup> has observed a case attended with the formation of bullæ and extensive ulceration of the indurated tissues.

Females are more often affected than males. All of my patients have been females, the youngest being fourteen years of age, and the oldest thirty-six. It is said that the band form is more frequent in children. The condition of the general health seems to have no definite relation in the causation of the disease. Various kinds and degrees of local irritation would seem to act as exciting causes in some cases. By most writers morphœa is regarded as a circum-

<sup>1</sup>Jour. Cutan. and Genito-urin. Dis., May, 1897.

<sup>2</sup>Ibid., Nov., 1896.



scribed form of scleroderma, a relationship that is borne out by certain clinical and anatomical circumstances.

**DIAGNOSIS.** Leucoderma differs from morphœa in the fact that in the former disease the patches are milky white and the texture of the skin is unaltered. The atrophic spots and maculations of leprosy are markedly anæsthetic, and other concomitant symptoms are generally present.

**TREATMENT.** Among the internal remedies that sometimes seem of value in this disease may be mentioned thyroid extract or thyroidin, iodide of potassium, salol and the salicylates. Brocq claims good results locally from electrolysis. Galvanism and massage may be tried.

**PROGNOSIS.** A guarded opinion as to the probable course and termination of morphœa is demanded, although, in a general way, it may be stated that after some years there is a tendency to the disappearance of the disease, and mostly without local detriment.

### ELEPHANTIASIS.

Elephantiasis, sometimes called elephantiasis arabum, lepra arabum and Barbadoes leg, has nothing in common with leprosy. The disease is characterized by repeated attacks of inflammation, by hypertrophy of the skin and subcutaneous tissue, and, as a result, by enormous enlargement and deformity of the parts affected. The disorder is both endemic and sporadic, and, while differing symptomatically in some respects according to the exciting cause, the result is in all cases the same. In countries where elephantiasis is endemic, viz., China, Egypt, Arabia, East and West Indies, the onset of the disease is marked by the so-called elephantoid fever, which resembles ordinary ague, but differs from it in its duration, and by attendant lumbar pain and vomiting. Simultaneously with the fever, or else preceding it, the part attacked swells and exhibits an erysipelas-like redness; in fact, the symptoms present all the features of an erysipelas—the skin is red, burning and tender, and vesicles and blebs may develop, and a clear or chyle-like fluid may be discharged. According to Fayrer,



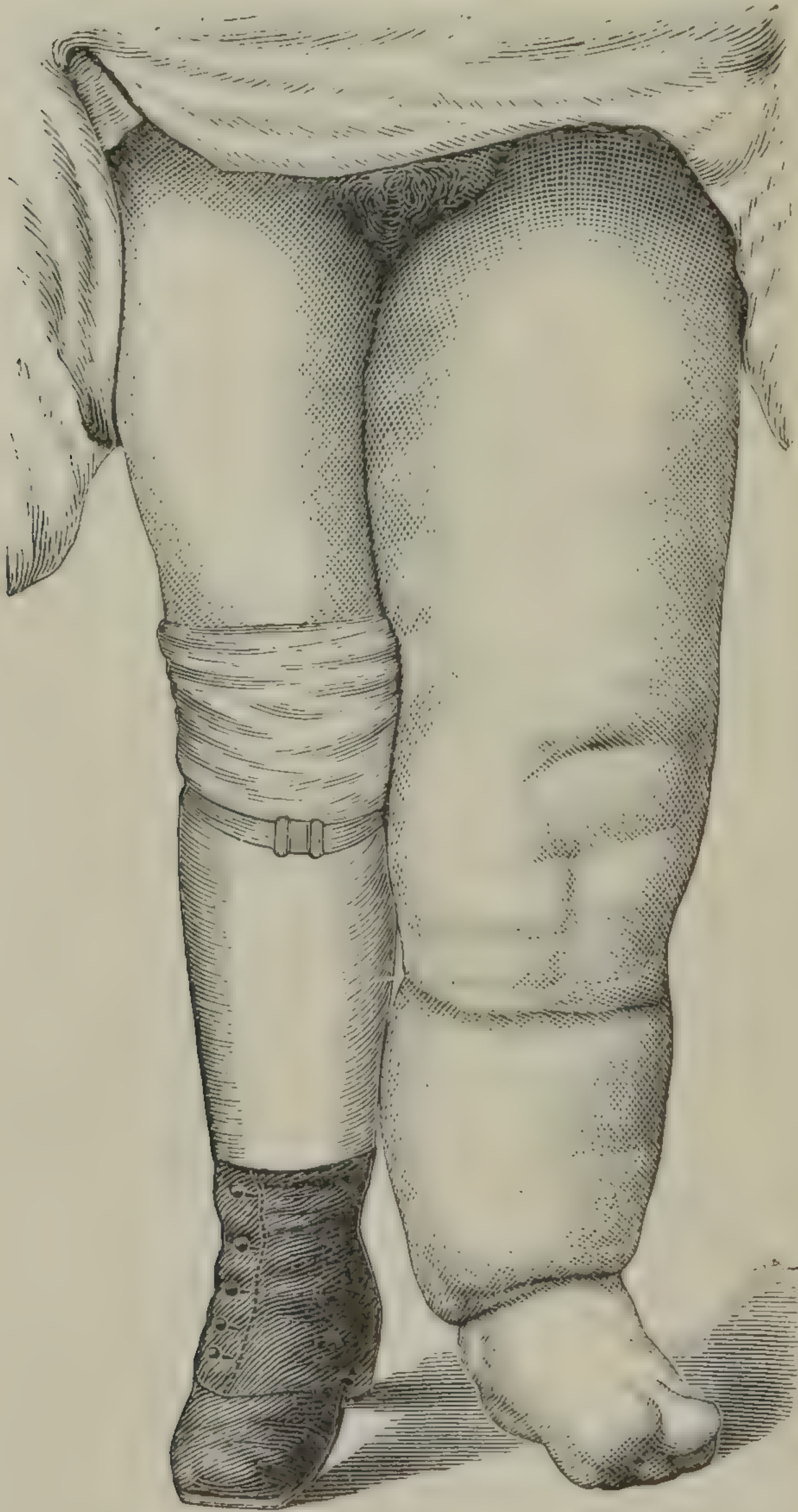
if the scrotum be the region involved, vomiting generally occurs, and the patient suffers from severe pain in the groin and along the spermatic cords and testes, which are red and swollen, acute hydroceles form, and the abdominal rings are so stretched by the swelling that upon its subsidence hernia is developed. After awhile the acute symptoms disappear, and the patient is apparently restored to health. Once again, however, after a variable period of rest, the whole morbid process is repeated, and it is noted that the limb, for example, is larger than before. At first the swollen part pits on pressure as in dropsy, but in the course of time the tissues become greatly indurated and will not yield to the finger. There is considerable variation in the constitutional phenomena; sometimes the fever is slight, sometimes of a high grade, and in rare instances the hypertrophic changes steadily but slowly progress with no attendant systemic reaction. According to Crocker nothing corresponding to the elephantoid fever is observed in England, but the febrile attacks agree in extent and severity with the attacks of erysipelas. In a number of cases that I have seen the same state of affairs was noted, or else the enlargement was progressive, but was unaccompanied by any fever at all.

The regions most commonly affected are the legs, usually one only, but in tropical countries often both, the male and female external genital organs, the arms, forearms, hands, scalp, ears, lips, cheeks and tongue. As commonly seen on the leg the clinical picture is striking. The most notable feature is, of course, the enormous size of the member, hence the name of "elephant leg." The limb is misshapen and unwieldy, and the normal contours are effaced. The anatomical features of the parts are lost, all the tissues being glued together in one unyielding mass; the muscles are indistinguishable, and even the bones may be involved in the general hypertrophy. The condition of the skin varies in different cases; sometimes it is dry and tuberculated, sometimes smooth and parchment-like, and in other cases eczematous, ichthyotic, warty



or deeply fissured. The lymphatics often become varicose, and a veritable lymphorrhœa is not infrequent.

FIG. 5.



Elephantiasis of Leg and Thigh (Taylor).

Subjective sensations are not especially marked. When eczema exists as a complication there is considerable itching, and during the inflammatory exacerbations the local



suffering may be severe. Pain may also be present if the case is complicated with deep fissures and varicose ulcers. The great weight of the affected parts, and the inconvenience arising therefrom, causes the most annoyance. The disease presents considerable variations of development; at times there exists only slight hypertrophy of the tissues, while on the other hand the growth may assume gigantic proportions, a tumor of the scrotum, for example, which was removed by Clot-Bey weighing 110 pounds. A condition called lymph scrotum, varix lymphaticus, or nævoid elephantiasis has been described as occurring in China, in which, according to Manson, there is present on the surface of the scrotum vesicles and enlarged lymphatics that when pricked or spontaneously ruptured discharge coagulable fluid. A very remarkable state called "acromegalia," which, however, is only objectively allied to elephantiasis, has received attention from various writers. The disease is an hypertrophy of the head and extremities, occurring in middle life, and presenting symptoms that are mainly connected with the nervous system. According to Shepherd an enlargement of the pituitary body has been found post mortem, and the thyroid gland is atrophied or diseased.

The principal anatomical changes found in elephantiasis consist in hypertrophy of the subcutaneous tissue, enlargements of lymphatics, blood vessels, and sometimes of the nerves, and secondary alterations of the muscles and bones. In a case examined by Mosely and Morison a large amount of pigment granules was present in the corium underneath the line of the papillæ.<sup>1</sup>

Elephantiasis is due to the occlusion of lymphatics, the result of inflammation, or arising from mechanical causes. Tropical elephantiasis is now known to be caused by the presence of the *filaria sanguinis hominis*. In endemic elephantiasis it is stated that the *filaria* is carried by the mosquito. As seen in this country, the disease may be brought about in a variety of different ways, such as, for

<sup>1</sup> Med. News, April 23, 1887.



example, by repeated attacks of erysipelas, chronic eczema of the lower extremities, etc. Cases have been reported in which there was an apparently hereditary influence. One of the most remarkable cases that ever came under my observation was in the person of a lady who had been confined to her chair for many years by rheumatism. In this instance both legs were enormously enlarged.

**DIAGNOSIS.** In fully developed cases of elephantiasis the diagnosis presents few difficulties. Recurrent erysipelatous inflammation occurring in the limbs or genitals should excite suspicion.

**TREATMENT.** In tropical cases, change of climate is the most reasonable prescription. Drugs are not specially efficient, except in the acute stage to relieve the inflammatory symptoms and the attendant pain. Rest and an elevated position of the parts are to be recommended. Elephantiasis of the genitals may be advantageously treated by amputation. Ligature of the main artery of the limb is generally only palliative, but a sufficiently large number of satisfactory results have been reported to warrant the operation in severe cases. Morton secured a good degree of amelioration by excision of a portion of the sciatic nerve in a case where ligature of the iliac artery had been futile. The application of blisters and the inunction of iodine and mercurial salves have been advocated. Noncorro and Silva Arango have used a galvanic current of 40 to 60 Trouvé elements with remarkable success. The applications lasted from five to thirty minutes, the positive electrode being placed on the healthy parts and the negative moved about over the affected region. In 1879<sup>1</sup> I suggested the use of the Martin's bandage, although it had probably already been used by others. The leg should first be powdered with starch, to which may be added a small quantity of salicylic acid, and over this a thin stocking should be drawn, as the rubber coming directly into contact with the skin is too irritating. When the patient is confined to the house, the limb may be kept elevated.

<sup>1</sup>St. Louis Courier of Medicine, May, 1879.



I have seen good results from the application of Squire's glycerole of the subacetate of lead, used in the same strength and put on in the same way as for *eczema rubrum* of the leg. The compound salicylated soap plaster spread on strips, and evenly bound on the leg, has proved useful in my practice. Ulcers may be dressed with iodoform. These latter procedures have reference, of course, to the treatment of the *eczema*, etc., that often accompany the *elephantiasis*, but in a case in which I used the glycerole of lead dressing, an exceedingly profuse, watery discharge came from the legs, and there ensued a remarkable diminution in their size.

**PROGNOSIS.** It is said that in the early stages of the disease spontaneous recovery may take place, but as ordinarily seen, *elephantiasis* is a persistent affection, although not necessarily a fatal disorder. Hebra has seen a fatal ending from pyæmia, and I have known death to result from thrombosis.

### MYXŒDEMA.

This is a general disorder of nutrition, due to atrophy or loss of function of the thyroid gland. It was first described by Gull in 1873. It is more common in women than in men, and is more apt to appear after middle life, although not unknown in childhood.<sup>1</sup> Several members of a family may be affected, and maternal transmission of the disease has been observed. The facial expression is characteristic, the features are broad, coarse and apparently puffy, the lower lip is thick and everted, and the lines of the face obliterated. Over the cheeks and nostrils may be seen a reddish flush, contrasting quite markedly with the paler orbital area. Moles and warty growths are common. The general integument, as well as the mucous membranes, are almost equally affected, the hands and feet, for example, being swollen and clumsy. There is pretty general alopecia, and the nails are stunted and brittle. Tumefaction of the skin and subcutaneous tissue

<sup>1</sup> Burckhart reports a case in a girl of three years.



is marked in the supraclavicular regions. Speech is slow and the mental faculties are greatly dulled. Irritability of temper is not uncommon, and in a large proportion of advanced cases insanity has occurred. The average bodily temperature is subnormal. The thyroid gland is always found post mortem to be diminished in size. Ord supposed that the meshes found between the bundles of fibrous tissue were filled with mucin.

The diagnosis of the disease in its incipency is difficult if not impossible, but when established its recognition is easy enough. Certain cases of chronic œdema of the face following recurrent erysipelas should be carefully differentiated by the history and the exclusive localization of the process in the one locality. Acromegaly (q. v.) also might bear a superficial resemblance.

The treatment is by thyroid feeding as originally suggested by Murray, or the more recently introduced thyroïdin. Small doses should be used in the beginning. Protonuclein has also been advised.



## CLASS IV.—ATROPHIES.

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### ALBINISM.

ALBINISM, which must be distinguished from leucoderma, is a congenital absence of the normal pigment of the skin. The condition may be partial or general. In universal albinism, the subjects of which are called albinos, the pigmentary anomaly is not limited to the skin, but the iris and choroid membrane are also devoid of coloring matter. Partial albinism is common in negroes; their eyes, however, retain the pigment, and in some cases a new deposit in the skin has been observed. Albinism is endemic in some tropical countries.

### LEUCODERMA.

Leucoderma, vitiligo or “piebald skin” is an acquired pigment atrophy of the skin, characterized by variously sized and shaped, smooth, white, non-elevated patches, surrounded by hyper-pigmented borders.

The disorder is rare in Europe, but common in tropical and sub-tropical countries. My own records show 24 cases in a total of 6,724 patients with skin disease, and I think the proportion is much greater than is represented by these figures, since many persons in the lower classes, especially negroes, do not apply for treatment.

As stated above, leucodermic spots have different shapes, being more or less round, ovalish or irregular in outline. In size they vary from a finger-nail to the palm, and even larger, especially when several patches have run together. The color is generally a milky-white, although sometimes with a pinkish tint. Hairs occurring in their areas may be white, or else retain their natural color. The skin, with the exception of its pigmentless condition, is nor-



mal, both objectively and subjectively. Around the patches the skin is very much darker, owing to an excess of coloring matter in these situations. Leucoderma is generally symmetrical, and is most usually found upon the sides of

FIG. 6.



Universal Leucoderma in a Negro.

the neck, face, about the hips, the backs of the hands and the extremities. The disease is always worse in summer, or rather it is more conspicuous at that season, owing to a more decided contrast between the pigmented and non-

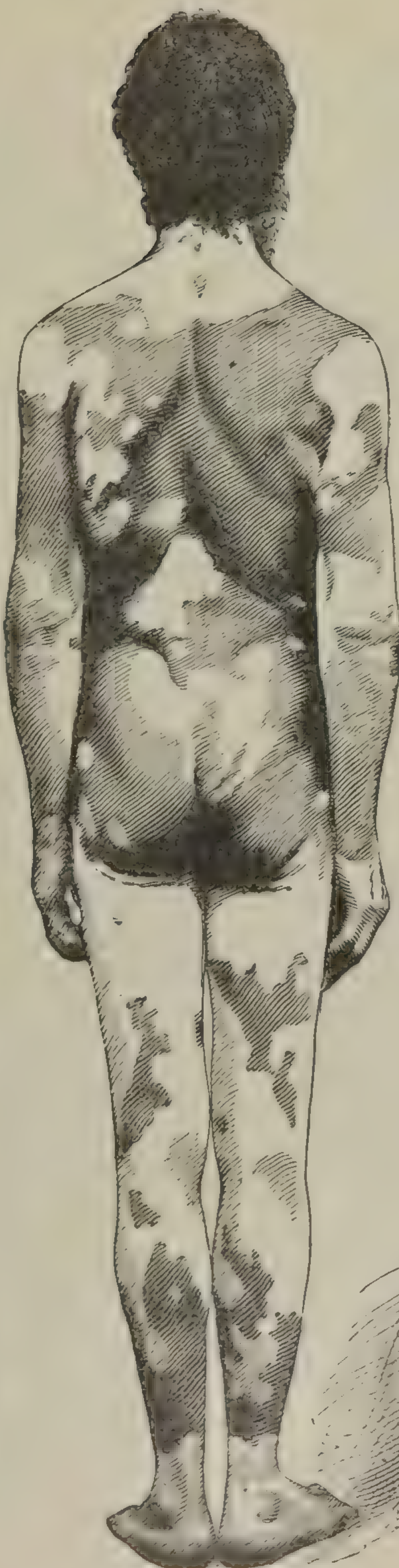


FIG. 7.



Leucoderma in the Negro.  
(Front View.) (Taylor.)

FIG. 8.



Leucoderma in the Negro.  
(Back View.) (Taylor.)



pigmented portions of the skin. The disorder, that is, the symmetrical forms, tends to steady progression, finally involving the whole body, and sometimes in this way abolishing the lines of demarcation between the light and dark parts of the skin. In two cases under my care, one of which occurred in a negro, the leucoderma became absolutely universal. Often the progress is stayed for a longer or shorter time, and sometimes, although rarely, the pigment may be renewed.

Both sexes are said to be affected equally, but two-thirds of my own patients have been women—this, however, for the reason that they are more apt to desire the removal of the blemish.

The disease generally makes its appearance some time between the tenth and thirtieth years, but I have seen it as early as the fourth year in one case, and in others at the eighth. The etiology of leucoderma is obscure, and we must content ourselves at present with regarding it as due to some disturbance of innervation. Leucoderma may occur symptomatically in connection with morphœa, alopecia areata, etc. I have seen a very pronounced, localized vitiligo supervene upon a chronic eczema, one patch upon the left forearm and another upon the back of the neck.

**DIAGNOSIS.** The diagnosis of leucoderma should present few difficulties. From morphœa and the maculations of leprosy it would be distinguished by the cicatiform appearance of the lesions in the former disease, and the anæsthesia, and sometimes slight scaliness, present in the latter.

**TREATMENT.** Little or nothing can be accomplished by drugs, either internally or locally. I have never seen any good come from the use of arsenic, iron, etc. With several willing patients I have tried all manner of stimulating local applications, viz., electricity, the sun glass, blisters, chrysarobin applications, etc., but all without permanent effect. It is quite possible, however, to ameliorate the deformity by temporarily getting rid of the hyper-pigmented borders, and by staining the white parts



with walnut juice or something of a like nature. Dr. Savill paints the brown patches with pure phenol.

PROGNOSIS. It will be seen from the foregoing account that the prognosis is unfavorable, although it is proper to state that in rare instances the pigment has been known to return.

### ATROPHIA CUTIS.

Aside from the peculiar form of atrophy of the skin known as xeroderma pigmentosum (q. v.) several other varieties may be described. Occasionally there occurs a general idiopathic atrophy, arising without known cause, in which the integument is discolored, checkered and visibly thinned. In a case under my care this condition was well illustrated.<sup>1</sup> The patient was a blind man aged twenty-three, of healthy parentage. The cutaneous disease dated from infancy, and the affection of the eyes from the age of seven. His general health was good, and he was fairly intelligent. His face presented a rosaceous appearance, the skin being thickened and reddened. There were scars around the mouth. The integument of the neck was pigmented in spots and reddened on the sides where enlarged vessels were visible. The front of the trunk presented a shining, checkered aspect, due to the alternation of many pigmented spots with atrophic macules. The entire skin, in fact, was tense and thinned. There were a number of cicatrices over the chest and abdomen, and the navel was stretched until on a level with the abdomen. The back was similar in appearance to the front of the body. There were no telangiectases. The skin about the elbows was scaly and deeply pigmented. The skin and muscles of the hands were atrophied and the sides of the fingers were adherent half way up to the tips. The condition of the lower limbs resembled that of the upper, except that the feet were unaffected. The hairs over the entire body were short and scanty. He perspired but little. The cutaneous sensibility was but little altered. There was xerosis of

<sup>1</sup> Trans. Am. Derm. Ass'n, 1884.



the conjunctivæ and corneal opacities. The mouth could be opened only with difficulty. The sister of this patient was said to be afflicted with a similar condition of atrophy.

Bronson<sup>1</sup> has recorded a case of symmetrical cutaneous atrophy of the extremities, and in the same valuable paper he has reviewed the analogous cases of Buchwald, Pospelow and others.

Ohmann-Dumesnil<sup>2</sup> has reported a localized atrophy of the skin of the arm, which appeared in the form of depressed areas. The probable cause was a burn on the wrist that produced some alteration in the nerves of the part.

Another atrophic condition is that known as *striæ et maculæ atrophicæ*.

The linear form occurs as white bands, from one to several inches in length, and a half inch or more in width. They are present in groups, arranged in somewhat parallel curves. They are most frequently to be observed about the hips and thighs. They are depressed below the surface and are of a glistening, bluish-white, mother-of-pearl color. The atrophic spots are usually discrete, and are said to be preceded by hyperæmia and hypertrophy rather than by atrophy. Shepherd has shown that these lesions may occur, especially in the young, after severe and prolonged illness, such as typhoid fever. In this same category may be included the glossy skin of writers, and other atrophic states due to nerve injury. In this connection are also to be noted the thinning of the tissues in old age, and the white atrophic streaks (*lineæ albicantes*) following upon the enormous stretching of the tissues during pregnancy, after the removal of tumors, etc.

### PERFORATING ULCER.

The disease which goes by the name of "perforating ulcer" is almost invariably connected with some affection of the nervous system, and therefore belongs to the class of

<sup>1</sup> Jour. Cutan. and Genito-urin. Dis., Jan., 1895.

<sup>2</sup> Alienist and Neurologist, July, 1890.



affections due to trophic disturbances. In most instances the original malady has been locomotor ataxia or a peripheral neuritis, such as arises in alcoholism, syphilis or leprosy. The ulcer usually occurs on the plantar surface over the metatarso-phalangeal joint of the big or little toe. Perforating ulcer is probably always due to trauma, though the injury may be so slight as to escape notice. Usually only one ulcer exists, but cases have been seen in which several were present. Not infrequently the ulcer begins as a suppuration under a corn which burrows into the soft tissues. Finally, the corn is detached and the orifice of a sinus is exposed, which often leads down to dead bone. From continual pressure in walking the edges of the sinus become much thickened. Often unhealthy granulations are present around the edges of the sinus. There is generally no pain connected with perforating ulcer, not even on pressure. There are usually present in part other evidences of neurotic disturbance, such as anæsthesia, loss or deformity of the nails, tylosis, etc.

The course of the disease is slow, but progressive.

In the TREATMENT of perforating ulcer the essential thing is prolonged rest. Amputation is only to be undertaken as a last resort, since the ulcer is very apt to recur in the stump. Treves recommends paring down the thick edges and filling the sinus with a cream composed of salicylic acid and glycerine, to which two per cent. of carbolic acid has been added. After healing, a thick felt pad, cut out over the scar, is to be worn, and every precaution taken to prevent fresh injury.

Stretching of the sciatic nerve has been strongly advocated.

### AINHUM.

This is a very unusual and peculiar affection first described by Clark and afterwards by Dr. da Silva Lima, of Brazil, which for a while was thought to be confined to the negro, but recently cases have been observed in India. So far as recorded no white person has ever been affected



by it. In the majority of cases the initial symptom is a furrow on the line of the digito-plantar fold of the little toe ; this furrow gradually becomes deeper, and the toe assumes an ovoid shape, having increased to two or three times its normal size. The furrow as it increases in depth finally forms a circle around the toe until the member is attached by a mere pedicle. As a rule, there is neither pain, inflammation nor ulceration, but when ulceration does occur the pain may be severe. The toe may fall off at the point of strangulation, or else, on account of the inconvenience experienced, the part is removed by the knife or ligature. The affection is usually one-sided, and attacks most commonly the little toe. Recent observers record a similar disease implicating the fingers and even the legs.<sup>1</sup> It is said also to be one of the frequent causes of congenital amputation, the disease manifesting itself during intra-uterine life. It is asserted to be more common in men than in women and to prevail in certain families. The etiology is obscure.

<sup>1</sup> De Brun, Med. Week, Sept. 28, 1894.



## CLASS V.—NEW GROWTHS.

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### KELOID.

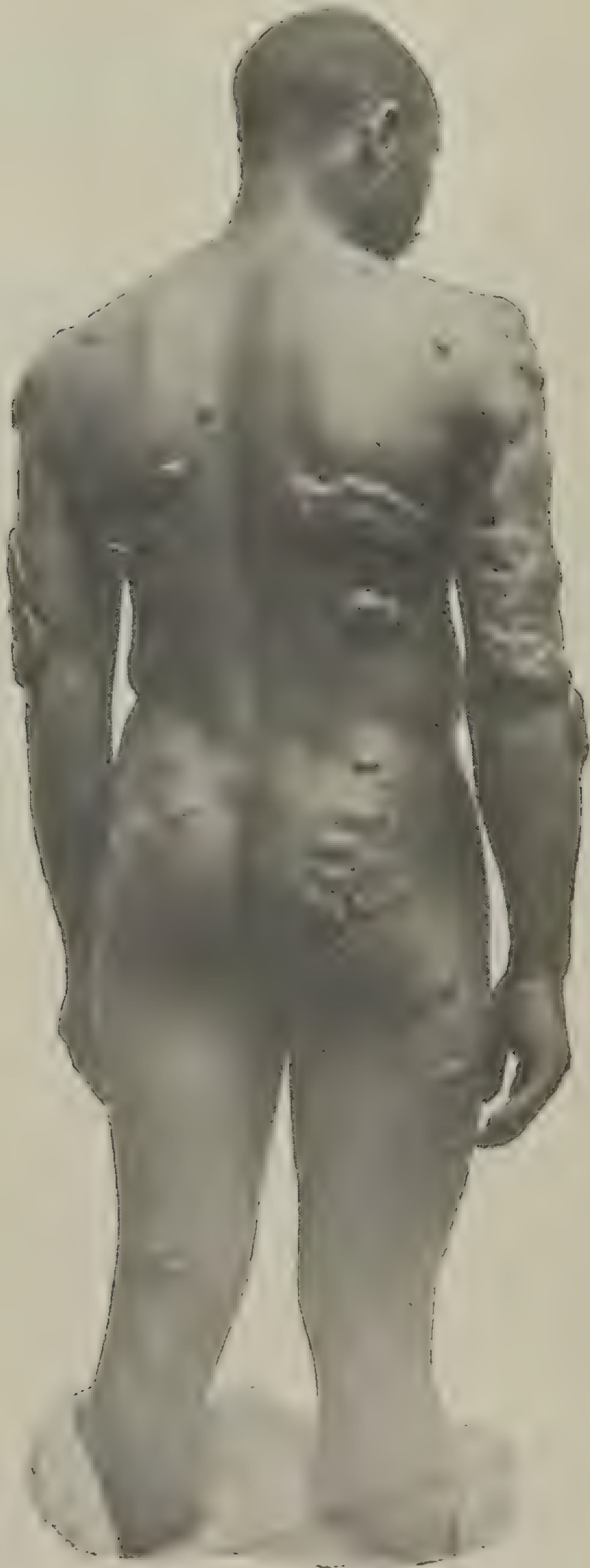
KELOID is a fibrous new growth of the corium which usually follows injuries. The lesions of keloid consist of variously sized elevations which rise abruptly from the healthy skin. The integument over such growths is smooth, shining and somewhat stretched; it may be the hue of the surrounding skin or of a pink color. Not uncommonly dilated vessels may be seen running over the surface. The tumors have various shapes, but usually present claw-like prolongations around the periphery. To the finger keloid is firm, but not hard. The most common site of the disease is the sternum, but it may occur upon any part of the body. One keloid alone is usually present, but if the disease has developed from the scars of a generalized eruption, such as small-pox, there may be large numbers upon the body. In some cases the tendency is to slow but steady progression, but in others, after reaching a certain size, the growth remains stationary. Keloid sometimes undergoes involution; this seems to be most common in young subjects. Very rarely suppuration has occurred in a keloid, and malignant degeneration has been observed. Most keloids are tender on pressure, and in some there is spontaneous pain of a burning or pricking character.

A condition resembling, in many of its aspects, keloid is the hypertrophied scar. This condition is most apt to occur where a wound of the skin has not healed by first intention. There is an over-production of scar-tissue, resulting in a raised, reddish or white, generally smooth and shining cicatrix. If the wound was sutured, there are very apt to be prolongations of the scar about the suture-points which make the hypertrophied scar much resemble keloid.

The negro race is especially prone to keloid, and among



FIG. 9.



Multiple Keloid.



them hypertrophied scar is very common. It is very likely that keloid is always the result of an injury, the trauma being so slight as to pass unnoticed in those cases where the disease seems spontaneous.

Keloid affects the corium, and consists of bundles of connective tissue, running mostly parallel with the long axis of the tumor. The nuclei and spindle-cells are scanty and grouped about the dilated blood vessels.

DIAGNOSIS. Keloid is to be distinguished from hypertrophied scar by the fact that the latter never extends beyond the limits of the original scar, while the former always passes beyond it.

TREATMENT. The removal of keloid by the knife or caustics is unsatisfactory, as the growth nearly always recurs, often in an aggravated form. Probably the best results can be obtained from the use of electrolysis. Only a weak current should be at first used, and then, if the result seems good, stronger currents may be applied. Verneuil has recommended pressure with the elastic bandage, taking care to avoid friction. Vidal advised mincing the growth thoroughly with a knife, attempting to divide all the vessels in the tumor. Sinclair Tousey<sup>1</sup> has used from ten to fifteen minims of a ten per cent. solution of thiosinamine hypodermically in a case of keloid with satisfactory results; also in a deformity after burns.

Hypertrophied scars should not be excised unless the tissue in which the cicatrix lies is lax enough to allow of easy approximation, as the condition is very likely to recur in wounds which heal by granulation. For this reason the greatest care should be taken to keep the wound aseptic. If it does not seem expedient to attempt the removal of the scar, it may be rendered less prominent by the use of electrolysis.

### FIBROMA.

This connective tissue new growth is variously termed *molluscum fibrosum*, *fibroma molluscum*, *molluscum simplex*, *molluscum pendulum*, etc. It should be dis-

<sup>1</sup> N. Y. Med. Jour., March 20, 1897.



tinguished from the *molluscum epitheliale* or *contagiosum*, with which it has nothing in common. According to G. II. Fox the commonest variety of fibroma occurs in the form of pea-sized, or larger, firm nodules that are generally situated on the side of the nose or cheek. They are often called moles or warts. In many instances they contain bristly hairs (*naevus pilosus*). Another simple form of fibroma is the *achrochordon*, which word is derived from the Greek, and signifies a point, or end, and a string. They appear mostly on the necks of elderly persons, and consist of filamentous offshoots that are popularly called soft warts, the *verres charnues* of the French. Both Wilson and Taylor speak of the development of these growths into the molluscum tumor. The latter author also regards the berry-like projections called mothers' marks as allied forms.

Ordinarily the term molluscum fibrosum is applied to the generalized fibromata of the skin. The tumors vary in size from a split pea up to the dimensions of an egg or larger. They also differ much in shape, consistence and other physical characters. Some are rounded and embedded in the tissues, or else they may be pendulous and pedunculated, and assume various shapes; they may feel soft and gelatinous, or hard or fibrous, the overlying skin may be normal in color, pinkish or purplish, and it may be loose or stretched; and finally the lesions may be occupied by a few hairs, and one or several comedones may be visible. Among the other growths, here and there, are to be observed some that are flaccid and empty, "like a little purse, out of which the money has vanished." One or several tumors may be present, in which case they are apt to be of considerable size, or they may be numbered by the hundreds or thousands, and exhibit all grades of development. The lesions are to be found especially on the trunk, but besides may be met with on the face, scalp, genitals and limbs; even the mucous membranes may be implicated. In some cases the tumors undergo involution, but as a rule they continue to increase in size and num-



ber. The patient makes no complaint of subjective symptoms, and relief is sought only as a consequence of the unsightliness and inconvenience of the disorder.

In connection with the fibromata of the skin there may develop large, lax and pendulous growths, similar to the condition described under dermatolysis; indeed this latter affection, even when occurring alone, may be looked upon as an extreme example of the same condition.

Fibroma molluscum occurs in both sexes equally, and generally makes its appearance first in childhood. In some instances it would seem to be inherited, showing itself in several generations of a family. Hebra's idea, that patients suffering from fibroma are physically and mentally stunted, is not always true. The general health does not seem to be impaired. The disease in its classical features is rare, but if the term is used somewhat more inclusively, the condition may be looked upon as not uncommon. Von Recklinghausen states that the multiple fibromata of the skin are in reality neuro-fibromata.

**DIAGNOSIS.** The recognition of molluscum fibrosum is rarely difficult. The tumors are generally numerous, the skin over them is usually normal, and the growths vary in shape and size. These tumors are to be distinguished from the growths of molluscum epitheliale by the fact that they do not show the characteristic depressions at their summits. They should also be distinguished from lipomata and sebaceous cysts; the first named being flatter, lobulated and never pedunculated, while the contents of the sebaceous cyst may be squeezed out, leaving the growth smaller in size, although at times the contents of a comedo may be expelled by pressure.

**TREATMENT.** The treatment of the large pendulous masses and flaps of skin is surgical. The smaller tumors may be snipped off with scissors or removed by electrolysis.

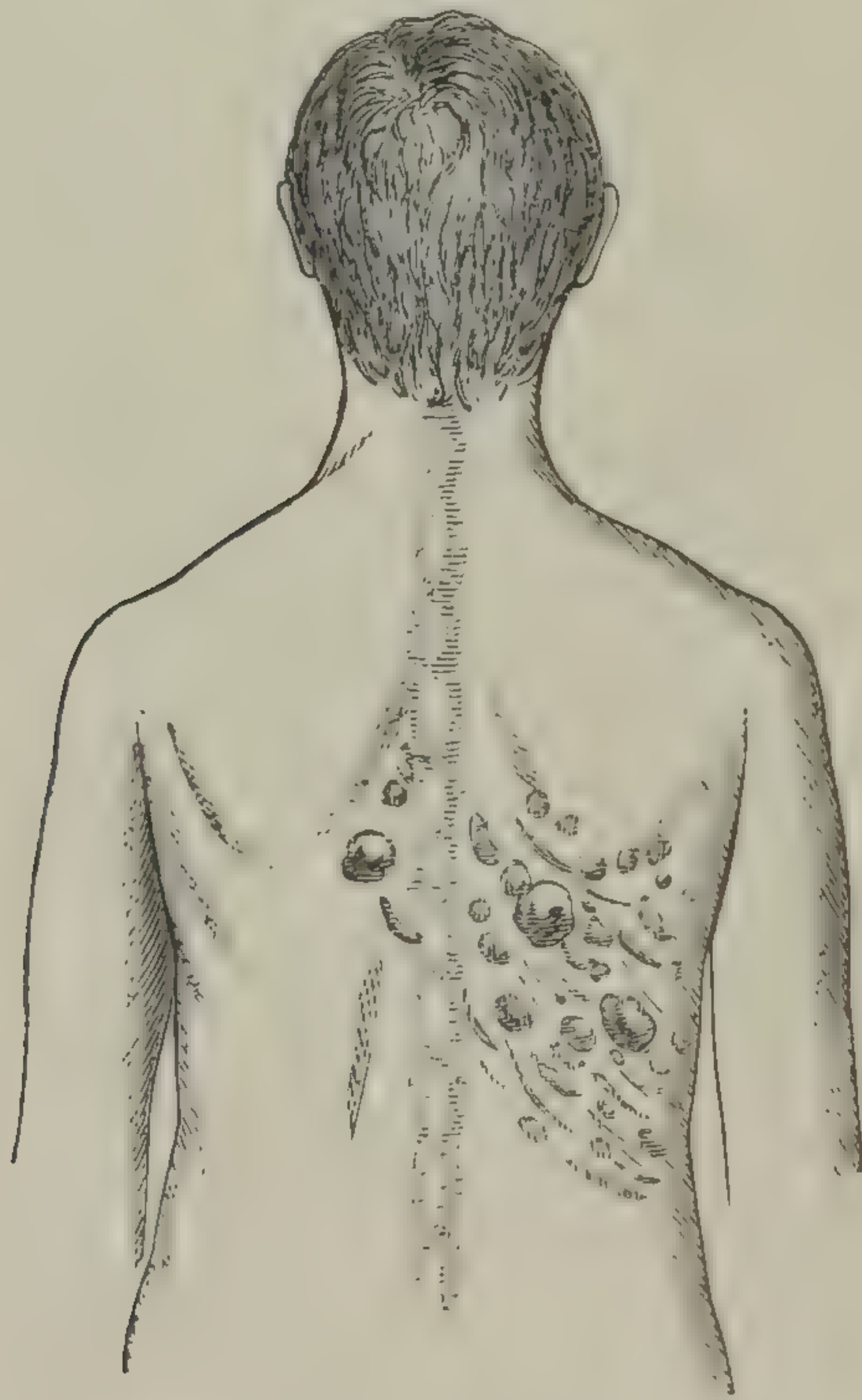
### MYOMA.

Myoma of the skin occurs as small multiple growths or as a single larger tumor. The first variety is very rare,



only twelve cases having been reported. The affection occurs as patches of lenticular-shaped tumors, the skin over which may be normal in color or more commonly of a reddish hue. Nearly all the cases have been accompanied by pain, either spontaneous or provoked by pressure. Some of the lesions may undergo involution, but the tendency is to slow progression. The growth is limited to the cutis, and the tumors are made up of smooth muscle fibers probably derived from the *arrectores pili* or from the muscular coat of the vessels.

FIG. 10.



Multiple myomata of skin.

The large single myomata are not so rare. They occur as variously sized tumors, sessile or pedunculated, chiefly on the breasts and genitals. Such tumors are very slow growing, and do not, as a rule, cause pain. They are composed of smooth muscle fiber mingled in varying proportion with blood vessels, fibrous tissue or even lymphatics.



The only method of treatment for myomata is ablation, which is often demanded by the pain of the tumors.<sup>1</sup>

### NEUROMA.

Under this name there have been described from time to time tumors of the skin or subcutaneous tissue that were accompanied by more or less pain, often of a neuralgic character. On microscopic examination such growths have usually been found to be made up of fibrous tissue with some nerve fibers. The "painful subcutaneous tubercle" exhibits a varied structure, with, however, the presence of nerve fibers in or on the tumor (Unna).

Duhring's<sup>2</sup> and Kosinski's<sup>3</sup> cases are usually quoted as examples of pure cutaneous neuromata.

### XANTHOMA.

Xanthoma, also sometimes called xanthelasma and vitiligoidea, is characterized by flat and elevated buff-colored lesions. It is a comparatively rare disease. Xanthoma is met with in two principal varieties, the plane or flat form (x. planum) and the elevated or tubercular and tuberosum form (x. tuberculatum or tuberosum). In some instances all of the varieties of the disease may be present at the same time (x. multiplex).

#### Xanthoma Planum.

In this form of the disorder the plaques of a yellow or buff color are only slightly if at all elevated above the level of the skin, and when pinched up between the fingers the patch feels smooth and without apparent infiltration. The comparison of these lesions to chamois leather embedded in the skin is quite happy. Xanthoma planum occurs mostly on the skin of the eyelids, and perhaps more

<sup>1</sup> Crocker has given an excellent summary of all recorded cases of dermato-myomata, including a personal case, in the Brit. Jour. Derm., Jan., Feb., 1897. See also author's case in Am. Jour. Med. Sci., April, 1886.

<sup>2</sup> Am. Jour. Med. Sci., Oct., 1873.

<sup>3</sup> Centralbl. f. Chir., No. 16, 1874.



frequently on the upper than the lower lids. The left side at the upper inner angle is apt to be attacked first, but symmetry is sooner or later established. The patches on the lids are usually present in the form of narrow bands, and often running quite across from one canthus to the other. Occasionally a series of patches may completely surround the eyes. The plane variety may also develop elsewhere.

### **Xanthoma Tuberculatum.**

The tubercular form is represented by variously sized growths, ranging from a pin head to a walnut or larger in diameter. They are usually of the same color and consistency as in the plane variety, but are sometimes of a reddish-yellow. Where a number of small growths have coalesced the resulting tumor (*x. tuberosum*) is lobulated and irregular and perhaps a little more resistant to the touch. The tubercles and tumors are prone to develop at sites of pressure and on exposed parts, *e. g.*, buttocks, knuckles, elbows and knees. Pain is sometimes complained of in this form, whereas in the plane variety there are no subjective symptoms whatever.

Other minor varieties of the disease have been described. G. H. Fox reports, for example, a case of the disease in which the lesions were arranged in striæ (*x. striatum*). Xanthoma multiplex is rare and is usually accompanied by jaundice. The xanthomatous deposit is also met with in the mucous membranes, *e. g.*, tongue, the oral cavity generally, larynx, trachea, œsophagus; and also in the hepatic ducts, the inner coats of arteries, peritoneum, on the sheaths of tendons, etc.

A most remarkable case of xanthoma multiplex observed by me some years ago<sup>1</sup> displayed in addition to dozens of xanthomatous growths of the plane, tubercular and tuberose varieties involving the skin, the mucous membranes of the mouth, the trachea and glans penis, a most curious development of the disease in the right intercostal

<sup>1</sup>St. Louis Courier of Medicine, Oct., 1884.



region. The following notes of this arrangement were taken at the time :

“ Commencing at the spine, and extending between the tenth and twelfth ribs, and obliquely upwards to the ninth rib, then crossing the ninth and tenth ribs on a line dropped

FIG. 11.



Zosteriform Arrangement of Xanthoma.

from the axilla to the crest of the ilium, and then obliquely downward to the umbilicus, and strictly limited by the median line, are observable clusters of innumerable yellow xanthomatous tubercles, having the exact arrangement of herpes zoster. These clusters of tubercles form a band on the right side of the body two inches in width, and exactly limited by the spine in the rear and the median line in



front. In three or four places a dozen or more tubercles have coalesced, making small quarter-dollar-sized plaques.

“The other hundreds of tubercles, although touching each other on all sides, still retain their individuality. They are slightly elevated above the line of the skin, and in many instances are clearly umbilicated. From their corymbose grouping and other features it is manifest that they correspond to the distribution of the cutaneous nerves of the region involved. These tubercles date from an early period of the disease. He gives an indefinite account of neuralgic pains in those parts before the growths appeared.”

This patient exhibited every possible type of xanthoma on different portions of his body, and besides suffered from similar deposits in the tendons, and also with probable implications of bone tissue in an analogous process.

In a further account of this case read before the American Dermatological Association<sup>1</sup> I was enabled to report that the disease had entirely disappeared, leaving no trace behind.

Xanthoma also occurs in children, but much more rarely than in the adult. Such cases are not accompanied by jaundice and are probably hereditary or sometimes congenital; otherwise they differ little from the disease in grown persons.

Under the name of *XANTHOMA DIABETICORUM* some thirty cases of a peculiar form of xanthoma have been reported. Especial attention was called to it by Malcom Morris in 1883.<sup>2</sup> The eruption consists, according to Crocker, of dull red, firm, discrete or confluent papules from a line to one-sixth of an inch in diameter, well defined at the margin and of an obtusely conical or roundish shape. On the top of most of them is a yellow or yellowish-white head, and some of the lesions are dotted and streaked with red from the presence of

<sup>1</sup> Sept. 8, 1889.

<sup>2</sup> Pathological Soc. Trans., XXXIV. See Johnston for a full bibliography, Jour. Cutan. and Genito-urin. Dis., Oct., 1895.



capillary vessels. The papules, owing to this coloration, simulate pustules, but in reality they are solid. The usual sites of the eruption are the elbows, knees and buttocks, but it may occur anywhere on the skin on the mucous membrane of the mouth and in one instance on the eyelids. The lesions come out rapidly at first, and after persisting for a variable period—months or even years—may disappear as rapidly, leaving no mark behind them; or again new lesions may appear while others are undergoing involution, or they may all disappear for a season to reappear at some future time. Itching, burning and tenderness may be present. With one exception the cases have all been men and the majority of patients have been between thirty and forty years of age. There has been a history of sugar in the urine in most instances, but not in all. Pentose was found in the urine in one case.

Dr. S. Pollitzer's<sup>1</sup> conception of the nature of xanthoma is interesting and is based on a ripe clinical and histological experience. He would separate eyelid xanthoma from xanthoma multiplex, in which latter class he would place xanthoma diabeticorum.

The grounds for these distinctions are as follows: The nodules of x. multiplex are firm, round, elevated papules; the patches of x. palpebrarum are soft level plaques. Eyelid xanthoma persists through life; x. multiplex sooner or later recovers; one is frequent, the other rare, and the two forms are rarely seen in the same person. As a result of microscopical examinations, he concludes that eyelid xanthoma is not a new growth, but is due to a degeneration of muscle tissue, the so-called xanthoma cell being fragmented muscle fiber in a state of granulo-fatty degeneration with proliferation of the muscle cell nuclei. On the other hand, x. multiplex forms a circumscribed tumor in the skin. It is an irritative hyper-plastic development of connective tissue whose cells produce fibrous tissue or undergo fatty degeneration. In diabetic xanthoma the process is a little more diffuse, and the tendency toward

<sup>1</sup>Trans. Am. Derm. Ass'n, May 5, 1897.



fatty degeneration more marked than in the non-diabetic form. In both irregular patches of granulo-fatty matter, interspersed with cellular detritus, occur in the middle of the nodules as the result of the fatty degeneration of the cells. The author thinks it probable that the fibrous nodes and fusiform enlargements of tendons in chronic rheumatism are to be placed in the same general class as the nodes of xanthoma; and he advances the theory that there is a large group of diseases—hepatic, diabetic, rheumatic—all characterized by toxemic conditions, and in all of which irritative connective tissue lesions may occur in the skin and elsewhere.

It is probable that xanthoma of the eyelids is more frequent in females; certainly in my own experience this has been the case. Hutchinson thinks that migraine is an important etiological factor. Hepatic disturbance is a tolerably constant concomitant. Hereditary influence is also to be noted, as already stated. Xanthoma is rare in childhood. I have met with cases in which there was no history of sick headache, jaundice or any other apparent deviation from health. In a case of mine quoted above, and which Johnston places among the cases of diabetic xanthoma in his bibliography, it is true there was sugar in the urine, but otherwise there was no resemblance whatever in its lesional features to that form of disease; and this coincidence must occasionally happen. Johnston regards the so-called xanthoma diabeticorum as an inflammatory skin disease which occurs in diabetics and resembles xanthoma.

DIAGNOSIS. Eyelid xanthoma with its characteristic coloration and arrangement hardly resembles any other disease, with the exception perhaps of closely set milia; but in the latter case the little tumors are whitish in color, hard to the touch, and their contents may be expressed after being pricked with a needle. The association of x. multiplex with jaundice, a not uncommon combination, should always attract attention. Urticaria pigmentosa should also be differentiated from multiple xanthoma, es-



pecially by the firmness of the lesions, the history of the early attack, the itching and the presence of ordinary wheals or factitious urticaria. Pollitzer has published a case in which multiple dermoid cysts so closely resembled *x. multiplex* that the correct diagnosis was only reached after microscopic examination. *X. diabeticorum* would seem to differ from *x. multiplex* by the firmness of the growths, their inflammatory character, their peculiar coloration, the usual freedom of the lids, the presence of itching or burning, the arrangement of the lesions near the hair follicles, the absence of jaundice and the presence of sugar in the urine in the first mentioned disorder.

**TREATMENT.** The treatment, which is entirely local, is not very promising. Excision is usually advised for the flat form about the lids, but it should be very carefully performed to avoid possible deformity. G. H. Fox's suggestion of destruction by electrolysis is more practicable, and has yielded good results in my hands in some cases.

Recently Stern has advised painting the patches with a ten per cent. solution of corrosive sublimate in collodion, taking care to shield the eyes.

Morrow reports fair results in removing growths of *x. multiplex* by means of a twenty per cent. salicylated plaster. In diabetic xanthoma the diabetes should receive appropriate treatment, which always has a good effect upon the eruption.

**PROGNOSIS.** The course of the disease is chronic and usually the lesions when fully established are permanent. This is especially true of *x. palpebrarum*. The multiple form may undergo spontaneous involution. In my case, although the eruption permanently disappeared, the jaundice remained, and when the patient died some number of years afterward the liver was found in a very marked state of cirrhosis. In diabetic xanthoma the prognosis is favorable.

### ANGIOMA.

In a general way angioma may be defined as that condition of the skin in which there is new growth or dilata-



tion of blood vessels. Lymphangiomata are made of newly formed or dilated lymph vessels. It is exceedingly difficult to give a clear description of the blood-vascular growths from an anatomical standpoint, owing to the confusion and differences of opinion that exist. Kaposi, for example, divides the angiomata into telangiectases, vascular nævus, angio-elephantiasis and cavernous tumor. Unna describes an angioma simplex (glomeruliforme) consisting of a new growth of arterial capillaries, an angioma cavernosum, the angiectases,<sup>1</sup> and the angiomatous nævi, which latter are all venous in nature.

Following the last-mentioned classification in part, the angiomata will be considered under the following heads.

#### Angioma Simplex.

According to Unna, this is the most frequent type of cutaneous angioma. Like the vascular moles, they are usually congenital, first appearing as a small point, but afterwards they grow more or less rapidly and may assume enormous proportions, whereas the angiomatous nævi grow merely with the growth of the body. Usually they are found on the head or neck or about the trunk and extremities; even the mucous membranes are not exempt.

In size they vary from a hemp seed to a cherry stone or walnut, or they may occupy quite extensive areas. They are bluish-black or bluish-red in color, usually level with the skin and smooth to the touch; but later they become compressible and somewhat irregular and lumpy in appearance. At times they undergo involution, or cystic or cavernous changes may occur. Sometimes marked pulsation may be observed. Variations in size and color may also be noted at times.

Various complications may occur; the skin covering the tumor may ulcerate and alarming hemorrhage ensue, or gangrene may develop. Unna denies that the growing angioma may develop out of the flat vascular nævus.

<sup>1</sup> These are divided into the telangiectases, the capillary varices of the aged, and the varicose and cavernous changes of the larger cutaneous veins in general varix.



### Angioma Cavernosum.

The true primary cavernous angioma (Winiwarter) is a diffuse or defined soft tumor, lobular or semi-spherical and of a bluish or, less rarely, red color. They may be made to diminish by touch, or they become turgid when pressure is exerted about them. When encapsulated they are movable under the skin. They are frequently painful. They are usually seated under the skin and rarely multiply. They most often appear during the first year of life, and sometimes in response to some traumatism. They grow slowly, but at times they invade the soft tissues extensively and attack bone and cartilage. Winiwarter states that these growths are analogous in their origin and development to the tissue of the corpora cavernosa penis.

### Nævus Vascularis.

The term vascular nævus used in the sense of port-wine mark, feuermal, tache de feu, nævus flammeus, etc., represents an exceedingly common disorder. It is usually congenital. They may appear as flat or elevated patches of a bright red or claret color and occupy only a small extent of surface or be spread over large areas. The integument may be quite smooth, thin or else present numerous rugosities and considerable hypertrophy, and little polypoid growths, darker in color than the nævus itself, are sometimes scattered over the affected region. The color of the nævus may be made to change by pressure or under the influence of position. A common site of these growths is the face, and they are usually unilateral. Unna has shown that a great many people have these growths on the scalp at the base of the occiput. A considerable percentage of children are born into the world with vascular nævi, but in many instances they disappear in a few months. A number of theories have been advanced as to the etiology of these growths. The peculiar arrangement of some nævi has suggested a neurotic origin (Simon). Virchow believes that nævi are the result of irritation at



fissural borders, rich in blood vessels, occurring during embryonal life, and Unna is satisfied that intra-uterine pressure will explain many cases.

### Telangiectases.

These develop as primary or secondary phenomena, although at times it is difficult to determine the cause. The usual sites are the face, neck and upper part of the trunk. A common clinical form is the *nævus araneus*, or spider cancer, in which there is a central red spot with radiating lines. In other cases small red or bluish vessels are seen coursing over the skin. These are frequently seen in elderly persons upon the cheeks and nose. In some rare instances almost the whole body may be covered by telangiectases. Telangiectases are also seen on mucous membranes or about the nares, the ocular conjunctiva and the pharynx. Telangiectases may result from any cause that produces long-continued congestion of the skin, such as interstitial changes in the kidney or liver, emphysema or other lung affections. Local obstruction to the cutaneous circulation also causes them, hence they are found at the periphery of scars and over new growth. Telangiectases constitute the essential features of *rosacea* in the second stage. The same condition in Kaposi's disease is well known.

**TREATMENT.** For obliteration of telangiectases nothing succeeds so well as electrolysis as first recommended by me. (For details of the operation consult the article on *Acne rosacea*.)

Various methods have been recommended for the removal of port-wine mark, such as linear scarification, tattooing with needles dipped in carbolic acid, etc. Some years ago I advised the employment of electrolysis in this affection also, and this procedure still holds the first place in my estimation. In many cases where small and very superficial *nævi* are concerned the blemish may be entirely abolished, and in other instances of more extensive involvement we are quite safe in promising considerable amel-



ioration. The operation presently to be described has especial reference to flat naevi of considerable extent.

The *modus operandi* consists in the use of a needle or needles, placed in a suitable holder, which latter is attached to the negative pole of a galvanic battery. The successive steps of the operation are the same as those that I have described in connection with the removal of superfluous hairs (see Hypertrichosis). The most important point relating to any destructive operation upon the skin is that the operator should control the destroying agent as much as possible. The facility with which this end is accomplished in electrolytic methods constitutes one of its chief merits. In order, therefore, that I may control this destruction in the most satisfactory way, I have for a long time discarded the bundle of needles and make the electrolytic puncture with one only.

By the cautious and expert use of this one needle, I now no longer set up extensive areas of suppuration, as was apt to be the case with the crown of needles; and since employing the single needle I have no fear of the keloidal scars, which sometimes followed the introduction of the bundle. The operation is thereby rendered somewhat more tedious, but certainly safer. It is a tedious thing to do at best, for when the puncture is made the surrounding region becomes so blanched that we are at something of a loss to know exactly where to make the next one to the best advantage, and the next day for quite a space around the operated place there is an inflammatory areola, and perhaps crusting, which forces us to wait for a number of days before operating again. Then I have found that one cannot really form an estimate of the result in a given area until at least six weeks or two months afterward; and when I have gone over all the space that I intend working upon, I am in the habit of dismissing the patient for a season. No one pretends for a moment that in a port-wine mark of any magnitude this operation is going to leave a normal skin behind it. In the majority of cases



we aim to produce minute, multiform scars, which in time become white, and thus obliterate the *nævus*.

It often happens, however, that a large area is permanently blanched without scar by apparent obliteration of vessels at its periphery. In some cases I have observed that intense brown pigmentation takes the place of the red surface, which, however, gradually undergoes absorption, leaving the skin white. This generally occurs on parts where the skin is thin. Where one needle is employed the resulting scars are usually thin, supple, non-depressed, in no case leaving behind elevated knots and cords such as I have seen result from galvano-cautery.

Very often I think it is better, in a cosmetic way, to endeavor merely to lighten the color of the mark rather than to convert it into a dead white patch; of course, where the mark is quite small, a thin white, and even glistening, cicatrix is not especially objectionable. It is not uncommon to find that in an apparently obliterated wine stain after a while dot-like telangiectases will appear here and there. They must be again destroyed. After a good many years' experience I may add that while this operation is by no means ideal it is perhaps better, in suitable cases, than anything else at our command.

For other varieties of *nævi* different modes of treatment may be instituted. Thus, according to the size, location and other features of the growth, we may make trial of the knife, the ligature, the injection of coagulants, or the inoculation of the surface with vaccine virus. Applications of ethylate of sodium are highly recommended by Richardson for superficial growths.

Duncan of Edinburgh, one of the earliest advocates of electrolysis in *nævus*, reserves this agent for what he terms the mixed and subcutaneous varieties. He uses steel needles insulated with vulcanite, the length of the exposed point varying, according to circumstances, from an eighth to three-quarters of an inch. Both poles are introduced, and in small *nævi* they are placed parallel and equidistant from each other and from the sides of the tumor; in



large nævi the negative needle may be moved from place to place or reintroduced at other points. The punctures should be covered with antiseptic wool and flexile collodion. In large nævi a little can be done at each sitting, but it is best to have an interval of several weeks between the operations. In small angiomata two or three direct punctures will often suffice for obliteration.

### ANGIOMA SERPIGINOSUM.

Under the title of infective angioma or nævus lupus Hutchinson first described an affection characterized by the appearance in the skin of minute, bright red papules having the appearance of grains of Cayenne pepper. Five cases have been reported, three being in females and two in males. In four of these cases the affection developed before the second year of life, and in two only was there a history of an antecedent nævus. The lesions are arranged in groups and gradually increasing in size, and spreading by peripheral extension, and meantime undergoing central involution, they eventually form rings and circles. New points, the "satellites" of Hutchinson, are constantly appearing just a little beyond the older patches, which in turn pursue a like evolution, so that in time large areas of skin are occupied by gyrate and serpiginous figures. According to Bowen the central involuted region was not observed to be atrophic in the reported cases, but in White's patient it was the seat of a dull brown pigmentation. There are no subjective symptoms. The progress of the disorder is slow, interrupted, however, at times by more rapid advances of the process of extension. The disease has been noted on the upper and lower extremities and in the scapular region with extension forwards to the nipple.

In White's and Hutchinson's cases there was recurrence of the growth after cauterization. Bowen, who made a most careful microscopical examination of specimens from White's case, says that the growth may be compared to an angiosarema from the point of view of the histological appearances, and that it may be regarded as due to some anom-



alous congenital condition of the vessels. Darier proposes the name "*sarcome angioplastique réticulé*." No plan of local destruction would seem to be available, but Crocker urges the use of electrolysis along the extending border so as to cause occlusion of the vessels.

### LYMPHANGIOMA.

By the term "lymphangioma" is meant a new growth of lymphatic vessels. Several varieties of the affection are recognized and classifications have been made, some using as a basis the anatomical structure of the growth, others the portion of the lymph system involved. Only two forms of cutaneous lymphangiomata have been recognized. To one of these Kaposi gave the name lymphangioma tuberosum multiplex. Since that time more extended research has proven pretty clearly that the affection which he thus denominated is not really a lymphangioma, but a tumor connected with the sweat-gland.<sup>1</sup> There remains, therefore, of true cutaneous lymphangiomata only the affection known as lymphangioma circumscriptum, which is a rare affection. The disease first manifests itself, in the majority of cases, in childhood. It may affect almost any region of the body, cases having been reported in which even the mucous membrane was involved. The lesions which form the essential elements of the disease are deeply-seated vesicles with thick walls. These vesicles are not disposed singly, but are aggregated into patches of irregular shape from one to three inches in diameter. Owing to the thickening of the epidermis over the lesions, the patches have a warty look. The vesicles are of the size of very small peas, colorless or pinkish, and, when pricked, emitting a clear serous fluid containing lymph-corpuscles. Over some of the vesicles telangiectasic vessels will be seen coursing. An accidental rupture of these may give to the contents of the vesicles a hemorrhagic character. Around a patch of closely packed vesicles will usually be found a few out-

<sup>1</sup> Pospelow's case seems to have been an instance of cutaneous cavernous lymphangioma (Unna).



lying lesions, and it is in these that the above-mentioned peculiarities can best be studied.

The course of the disease is a slowly advancing one, with no tendency to heal spontaneously.

No cause for the development of lymphangioma circumscriptum is known. Besnier attaches importance to the fact that some of the reported cases have been associated with venous nævus.

The growth is composed of flask-shaped chambers lying in the papillary and deeper parts of the cutis, lined with endothelial cells.

DIAGNOSIS. If the peculiarities of the lesions and the chronic course of the disease are borne in mind, there is no other affection with which lymphangioma circumscriptum can be confounded.

TREATMENT. Total destruction is the only treatment which offers any hope of success. Caustics have been used for this purpose, but often the lesions have again returned in the neighborhood or in the original area. In suitable regions the use of the knife, the incision being carried quite far from the borders of the patch, will be found the best treatment. In situations where the knife is not suitable careful destruction of each vesicle with the electrolytic needle is to be recommended.

### XERODERMA PIGMENTOSUM.

This formidable affection was first described by Kaposi in 1870. Since that time, and as a result of the admirable description then given, a number of cases—seventy-six in all—have been reported in various countries, including America. The disease has received numerous titles, more or less descriptive of the condition present, such as angioma pigmentosum et atrophicum, Melanosis lenticularis progressiva, atrophoderma pigmentosum, etc., but it is likely that the term here employed, and as originally selected by Kaposi, will prevail. According to Kaposi<sup>1</sup> the initial lesions consist of reddish-brown to

<sup>1</sup>Twentieth Century Practice, N. Y., 1896.



dark brown spots from the size of a pin head to a lentil, which appear usually in the course of the second year of life. Some authorities maintain that the pigmentation is often preceded by an erythematous or a measles-like erup-

FIG. 12.



Xeroderma Pigmentosum (Taylor).

tion, which comes and goes for a time, to be followed finally by the pigmentation, which is situated upon the face, neck, arms and legs, or, in other words, those parts of the body that are more or less exposed in infancy. At first the freckles as well as the intervening skin are soft



and pliable, but towards the end of the second and in the course of the third year punctiform and linear telangiectases manifest themselves upon and around the freckles, which latter in the meantime have become more numerous; and also lentil-sized or larger, white, wrinkled or desquamating atrophic spots make their appearance, which correspond either to the pigmentations or to the areas between them.

The order of development in time of these various lesions is by no means clearly settled, and is of no great importance in diagnosis.<sup>1</sup> The skin loses its elasticity, looks thin and wrinkled, and is devoid of glandular orifices. As a result of this atrophic condition considerable disfigurement is developed in the form of erosion of the lids, xerosis of the corneæ, contraction of the nasal and oral cavities and deformity of the ears. The integument is dry and rough, the scalp is scaly, and pustules and crust-covered ulcers are to be noted, especially about the face.

In a large number of cases certain hypertrophic changes are to be noted, sometimes as early as the fourth or fifth up to the tenth year of life, or they may be delayed until the eighteenth or twentieth, or even so late as the fortieth or fiftieth year. This is the period of new growth. Some of the tumors are benign, some malignant. They generally originate in warty patches that spring from the pigmented spots. These excrescences may remain innocent for long periods or may disappear temporarily or permanently. In some situations, such as the edges of the lids and at muco-cutaneous junctions, these growths are apt to increase in size and finally form sessile or pedunculated tumors, which assume a fungating appearance.

The ultimate result in most of these formations is malignancy of some kind, the most frequent being an epitheliomatous degeneration, although various other types, such as sarcoma, etc., have been noted. After the development of the tumors the length of time the patient

<sup>1</sup> Taylor is emphatic in his belief that the pigmented spots follow exactly the site of a pre-existing red spot.



may survive is uncertain. Death occurs speedily in some cases, while other unfortunates live many years. Finally, however, they succumb to marasmus, or, directly or indirectly, they die of the terrible ravages of the malady. Of the essential etiology of xeroderma we have little knowledge. The fact of its attacking several children in the same family, which is usually the case, very naturally suggests contagion due to some parasitic agency, but this theory lacks confirmation. Kaposi says that the cause of the disease must be based upon a congenital formative and nutritive anomaly of the papillary layer, its vascular and pigment portions, since it always begins in the first year of life. Various other explanations have been offered, such as the influence of sunlight. Unna insists that xeroderma pigmentosum is a typical carcinomatous disease, and that it shows a striking analogy to the "sailor's skin" described by him, which latter he believes is developed under the influence of the rays of the sun.

**DIAGNOSIS.** If we take into consideration only single features of the disease it is quite possible to err in diagnosis, but if we have regard to the complex of symptoms, namely, the pigment spots, the telangiectases, the atrophic macules and the new growths the picture becomes exceedingly striking and significant. It must be confessed, however, that it would be impossible to form any but a conjectural opinion in the beginning.

It is perhaps sufficient to warn against the possibility of confounding this disorder with scleroderma.

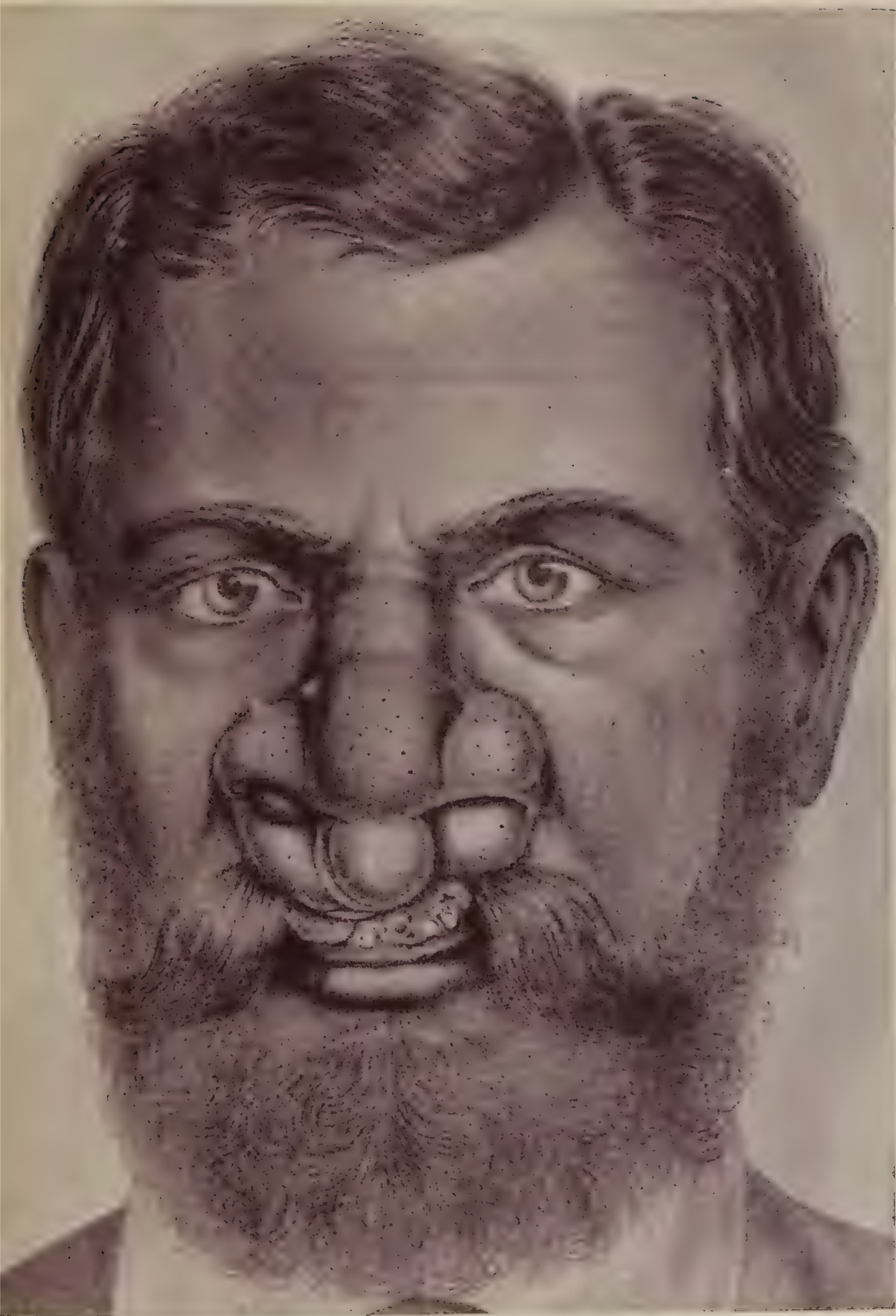
The treatment is necessarily symptomatic; thyroid extract might possibly prove of some advantage. A. W. Brayton highly recommends curetting the morbid growths and the local application of Fowler's solution as a satisfactory method of preventing further extension of the malignant process.

### **RHINOSCLEROMA.**

This disease, first described by Hebra and Kaposi,<sup>1</sup> usually begins as an extremely hard, circumscribed, nodular

<sup>1</sup> Wiener Med. Wochenschr., 1870, No. 1.





Rhinoscleroma.







or flattened, somewhat elevated, plaque-like growth about the alæ of the nose or the septum. In rare cases, however, it originates in other sites, as in the naso-pharyngeal cavity,<sup>1</sup> the arches of the palate or the larynx.<sup>2</sup>

It consists of isolated or aggregated tubercles, of a normal to a dark brown color, with small blood vessels ramifying over the surface. It is somewhat elastic to the touch, firmly bound down to the tissues, and of a hardness which Hebra compared to that of ivory, and other observers to that of wood, stone or cartilage. The epidermis covering it is smooth and dry, or it may be fissured or even eroded, and covered with yellowish crusts. The hair follicles and sebaceous glands are obliterated. The surrounding skin shows no abnormal appearances whatever, and the tumor itself is, as a rule, not painful except on pressure. Spontaneous involution never occurs, nor does the growth show any tendency to suppuration or ulceration. Zeissl, however, has reported a case which terminated in this way.<sup>3</sup>

It increases very gradually in size and invades neighboring parts. The lips, cheeks, mouth, gums, palate, pharynx, larynx and even the trachea<sup>4</sup> may be affected, and Kaposi<sup>5</sup> and Pick have observed an analogous condition about the meatus and auditory canal. The affection is, however, so far as known confined to these parts.

By encroaching upon the lumen of the nose which may be entirely occluded, as well as by diminishing the caliber of the larynx respiration may be interfered with, and if not relieved may terminate fatally. When removed by the knife or caustics it recurs quite rapidly, but during the whole course of the disease it remains a local condition and does not affect the health of the patient. Perforation of the palate and septum may occur. (Plate I.)

<sup>1</sup> Mibelli, *Giorn. Ital. delle mal. ven. e della pelle*, 1888, 1, 2.

<sup>2</sup> Catti, Kaposi, *Pathol. u. Therap. der Hautkrankheiten*, Wien, 1887, page 746.

<sup>3</sup> *Wiener Med. Wochenschrift*, 1880, No. 22.

<sup>4</sup> O. Chiari, *Medizinische Jahrbücher*, Heft 2, Wien, 1882.

<sup>5</sup> *Ibid.*, 745.



Rhinoscleroma is a disease of adult life which is confined to rather narrow geographical limits, being most common in Russia and Austria. Wende, however, has reported a case in a boy of eleven years, born in this country of American parents.<sup>1</sup> The active cause of the malady is a capsulated bacillus which some have thought to be really the pneumococcus. Microscopically, the growth is like a granuloma. The connective tissue is arranged in firm supporting bands between whose meshes is found the characteristic soft tissue of the disease, which consists of two kinds of cells, the hydropic and the hyaline. The diseases which most resemble rhinoscleroma are syphilis, epithelioma and keloid. Syphilis and epithelioma ulcerate early, while in keloid there would usually be a history of a previous scar.

**TREATMENT.** Permanent removal of rhinoscleroma has never been accomplished, as the tumor always re-forms. Lang obtained a good result by the use internally and locally of salicylic acid. Ten grains were administered by the mouth three times a day and hypodermatic injections of a one per cent. solution were made into the growth, while an ointment of the drug was applied in the nares on cotton plugs and a salicylic acid snuff used. Unless to save the life of a patient from some intercurrent accident, such as obstruction to respiration, operative treatment does not seem to be indicated.

### TUBERCULOSIS OF THE SKIN.

If we leave out of consideration the relationship of lupus vulgaris, the scrofulodermata, etc., to the tuberculous process, the affections to be described under this heading will be materially restricted. For reasons given elsewhere the following types only will be briefly mentioned :

#### **Tuberculosis Cutis Vera.**

This is a very uncommon condition occurring in persons who are the subject of general tuberculosis. It has its

<sup>1</sup> Jour. Cutan. and Genito-urin. Dis., March, 1896.



origin at the muco-cutaneous outlets, *e. g.*, lips, anus, vulva, etc., whence it spreads to the contiguous skin. The lesions are painless, and occur in the form of shallow, isolated ulcers with slightly infiltrated edges, and reddish-yellow floors covered with a thin secretion.

According to Kaposi a flat cicatrix forms upon the ulcer, while at the periphery appear new-formed, tolerably firm papules of a pin-head size or slightly larger. The centers of these lesions become grayish and in a few days drop out, leaving punched-out ulcers, in this way enlarging by the multiplication of new papules. Although complete recovery rarely occurs, the centers of the ulcers may scar over, and even cicatrization may occur at the edges. In some cases that have been reported the affection of the skin has apparently preceded the internal tuberculosis.

#### **Verruca Necrogenica.**

The anatomical wart commences as a small flat infiltration on the knuckles or between the fingers, and soon becomes pustular. Finally, the surface becomes irregular and warty, and presents the type of a papilloma. It is

FIG. 13.



Verruca Necrogenica.

not uncommon on the hands of those engaged about the dissecting-room or in making post-mortem examinations. It is said to be clinically and anatomically identical with lupus verrucosus and Riehl and Paltauf's disease, next to be described.



**Tuberculosis Verrucosa Cutis.**

Under this designation Riehl and Paltauf have described a form of cutaneous tuberculosis occurring in individuals exposed to animal infection—namely, butchers, coachmen, cooks and others. It is rare on the palms, but is met with generally on the backs of the hands and the interdigital spaces, just as in the anatomical tubercle. It occurs in large and small warty patches, round, oval or serpiginous. These patches extend peripherally, and are surrounded by a bright erythematous areola, within which may be detected a zone of small scattered pustules seated on a brownish or livid infiltration. The middle of the patch is made up of uneven and warty growths, which are covered with crusts, and, as is usual with such formations, pus may be made to well up from between the papillomata. The affection disappears by flattening of the central verrucæ and drying up of the pustules; a pliant, thin, sieve-like scar results. Tubercle bacilli were demonstrated in the granulation tissue and in the giant and epithelial cells of the caseous nodules.

Other forms of this type of tuberculosis have since been recorded. The inflammatory halo, for example, may be absent, the lesions being represented by a soft nodule with but little papillary overgrowth. It is probably identical with the lupus verrucosus of McCall Anderson,<sup>1</sup> which he describes as occurring on the hips and extremities of poor children.

**Tuberculosis Miliaris.**

Lichtenstein<sup>2</sup> reports a case of pulmonary tuberculosis in a boy of four years, which subsequently became generalized and from which he finally died; but before the termination of the disorder, in the course of the fourth week, there appeared a crop of isolated, poppy-seed- to hemp-seed-sized, hard, red papules over the trunk, face and extremities. Several successive outbreaks occurred

<sup>1</sup> Jour. Cutan. Med., Vol. 1, p. 26, 1868.

<sup>2</sup> Münch. Med. Wochenschr., No. 1, 1897, p. 1.



lasting eight to fifteen days, followed by disappearance of the papules. Some of the lesions become vesicular or pustular. Numerous tubercle bacilli were found on examination of the eruptive elements.

In a paper read before the Third International Dermatological Congress<sup>1</sup> Dr. Hyde classified the cutaneous symptoms of cutaneous tuberculosis in three groups, excluding lupus vulgaris:

I. Affections resulting from primary or secondary tuberculous infection: (1) *Verruca necrogenica*; (2) *Tuberculosis verrucosa cutis* (Riehl and Paltauf); (3) *Tuberculosis papillomatosa cutis* (Morrow's type); (4) *Fibromatosis tuberculosa cutis* (Riehl); (5) *Elephantiasis tuberculosa cutis*; (6) *Tuberculosis cutis ulcerativa*—the tuberculous ulcer (Chiari); (7) *Tuberculosis gummatosa ulcerativa* (cutaneous scrofuloderm); (8) *Lymphangitis tuberculosa cutanea* (Besnier); (9) *Tuberculosis cutis serpiginosa ulcerativa*; (10) *Tuberculosis cutis fungosa*; (11) *Tuberculosis nodosa atrophica* (lupoid form).

II. In the second group are placed those lesions of the skin where tubercle bacilli in each case has not been demonstrated, but where there is a strong probability of their existence: (1) *Lupus erythematosus*; (2) *Erythema induratum*; (3) *Lichen scrofulosorum*; (4) *Tuberculosis suppurativa et bullosa acuta* (Hallopeau); (5) A group of acneiform, sycosiform and follicular disorders; (6) Keloid; (7) *Ulcus molle* complicated with tuberculosis.

III. Dermatoses where tuberculosis of some other organ than the skin may be indirectly responsible, viz.: (1) Eczematoid disorders; (2) *Erythema pernio*; (3) Exceptional forms of erythema multiforme; (4) Some of the melanodermata; (5) Purpura of the cachectic; (6) A few of the medicamentous dermatoses.

It will be observed that these titles in some instances represent but variations in the type of lupus vulgaris, while others may be better placed under the scrofuloder-

<sup>1</sup> Abstract in the Brit. Jour. Derm., Oct., 1896, with discussion; also see paper in full in Jour. Cutan. and Genito-urin. Dis., Oct., 1897.



mata: on the other hand, some of the disorders here grouped will not readily be accepted as belonging to the class of tuberculoses at all, that is, under existing conditions of knowledge of the subject.

At this same meeting Hallopeau stated that in discussing this question it is a point of importance to decide what are the criteria by which a tuberculous affection may be recognized. He regarded the following data as affording positive proof of tuberculosis: (1) The possibility of transmitting the disease by inoculation of the morbid tissue; (2) The presence of tubercle bacilli; (3) The production of a certain reaction on the organism by the intra-inoculation of tuberculous products; (4) The production of certain distinct eruptions, as lichen scrofulosorum, by the use of tuberculin. On the contrary the mere arrangement of the diseased tissues in nodules, the presence of giant cells, the co-existence of tuberculous affections, the ordinary reaction after the use of tuberculin, and finally hereditary predispositions, are to be regarded only as presumptive evidence.

### LUPUS VULGARIS.

Lupus vulgaris is an exceedingly chronic tuberculous disease of the skin or mucous membranes that generally commences in childhood, and consists of a cellular new growth in the corium, and is characterized clinically by papules, tubercles or infiltrations, with subsequent formation of scars. The affection begins as pin-head-sized, brownish-red, yellow or even bright red spots deeply embedded in the skin, the color of which can be paled, but not entirely effaced, by pressure. These primary lesions may be elevated, depressed or on a level with the skin. At this stage of the process the macules may be quite visible to the eye, but inappreciable to touch, and they may be discrete or closely aggregated into flat infiltrations. These macules may also be detected at the periphery of old patches and as redevelopments in scar-tissue.

Very gradually translucent, so-called apple-jelly-like nodules develop, which eventually, in months or years,



form one or more dull-red, elevated, somewhat scaly patches (lupus tuberculosus). The lupus growth is of soft consistency, not hard like the nodule of syphilis, and can readily be broken down by slight pressure with a probe.

FIG. 14.



Lupus Vulgaris.

In this form the disease continues for a longer or shorter period, but finally certain retrogressive changes occur. The lupus tubercles (or lupoma) may undergo resorption and leave in their wake an atrophied glossy and scaling surface looking not unlike a burn, and usually presenting



a raised edge made up of pale or reddish nodules (*lupus exfoliativus*, *lupus non-exedens*). In the majority of cases the lupus infiltration breaks down and ulceration occurs (*lupus exulcerans*). The ulcerations are not often painful, are irregular in shape, more often shallow than deep, present a well-defined border and a red, bleeding surface. The pus-secretion is not profuse, but sufficient to form dirty, reddish-brown crusts. When healing takes place the resulting scars are generally thick and distorted. This is the type of lupus usually met with in practice.

The course of lupus is always exceedingly chronic, oftentimes years elapsing before any great amount of surface is involved, but eventually its ravages may be appalling. The onward march of the disease is by no means steadily progressive. As the result of various influences, both local and constitutional, its progress may be delayed for a while, to be succeeded after a variable period by renewed activity, and thus with an advancing line of ulceration in one place and cicatrization in another, or a renewal of the lupus in parts already scarred over, the disorder as a whole discloses a striking clinical picture.

Lupus presents considerable variety in its clinical expression, due in part to the regions attacked, the constitutional peculiarities of the sufferers themselves, and the complications that may arise. It must be remembered, however, that these different forms are accidental developments, and, moreover, that it is no uncommon thing to find various phases of the lupous process transpiring at one and the same time on the same patient.

Lupus is not usually symmetrically disposed, although it may become so accidentally. The disease may occur in a single patch or less frequently in several; on the other hand, there may be many foci of disease (*lupus disseminatus*). If exuberant granulations form in the lupus patches it is known as *lupus hypertrophicus*, and when the disease spreads by an extending border or the coalescence of one or more patches it goes by the name of *lupus serpiginosus*. By *lupus papillomatosus* is meant a



papillary overgrowth, such as may happen on any ulcerated surface, and in this disease is most often encountered on the extremities.<sup>1</sup> Lupus verrucosus is regarded by Unna as identical with verruca necrogenica, and is considered both by McCall Anderson and Crocker as a form of scrofuloderma.

Leloir<sup>2</sup> describes a form of lupus vulgaris under the title of lupus vulgaris erythematodes, which I believe is very common, but is usually confounded with lupus erythematosus. Somewhat abridged, Leloir's description of erythematoïd lupus vulgaris is as follows: It occurs on the face, rarely on the trunk, and never on the limbs. It appears as a large or small plaque, occasionally in one, two or three patches, usually on one cheek, but often invading the nose and both cheeks in a symmetrical manner, just as in butterfly lupus erythematosus. The affected surface has a more or less lively redness, which disappears in part on pressure. The surface is seen to be marbled by a sort of quadrillage of a red-brown or violet, in the midst of whose meshes may be found small white or yellow points. Fine vascular arborizations may also be noted, especially at the periphery. The erythematosus surface is sometimes here and there lightly desquamative, and even covered with small lamellar crusts, which may have a seborrhœic aspect, particularly at the border of the plaques.

The plaque is slightly elevated at the margins, and, when sufficiently old, depressed in the center. Notwithstanding these striking points of resemblance between lupus erythematosus and erythematoïd lupus vulgaris, it often happens that if the skin is stretched at the level of the zone of the active extension of the disease it is possible to make out the small yellow miliary nodules of lupus vulgaris, which will present the usual physical characteristics

<sup>1</sup>I have shown elsewhere (*Archives of Dermatology*, Oct., 1880) that under the general designation of papilloma cutis writers have included a great variety of clinical forms, but which are in reality secondary to syphilis, lupus, etc.

<sup>2</sup>*Traité pratique de la Scrofulo-tuberculose*, Paris, 1892.



of such nodules. These lupus tubercles are very difficult to find, however, and not always present at a given time. Other points that establish the true lupus nature of this affection are the profound infiltration of the plaques, and the fact upon which Leloir lays much stress, that there is a tendency to cicatrization at the periphery—an event, he claims, that never takes place in lupus erythematosus.

The face is the usual site of lupus, especially the nose and cheeks, and also the ears. The trunk and extremities are also attacked; the hands and feet not infrequently. The forehead, the chin, the penis and the palms are practically exempt. It is noteworthy that exposed parts are for the most part implicated.

Lupus of the mucous membranes is not often primary, although Bender has shown that this occurs oftener than has been generally credited. As a rule, the involvement of the mucous membrane of the eye, nose, mouth, larynx and vagina is secondary to the disease on the parts adjacent or elsewhere on the body.

While the cartilage may be destroyed by lupus, as seen especially on the nose and ears, it is doubtful whether the bones are ever affected except in a secondary way.

Various complications may arise in the course of lupus. Swelling and suppuration of the lymphatic glands contiguous to lupous patches are not uncommon, and chronic enlargement of the parotid has been often noted. Leloir regards the lymphatic gland involvement as due to secondary tuberculous infection, and not merely as irritative. Erysipelas not infrequently supervenes, and sometimes has a decided curative effect. Recurrent attacks of lymphangitis and erysipelas often lead to chronic hypertrophy and a condition of elephantiasis of the lower limbs. Abscesses and all manner of inflammatory conditions, caries, periostitis, osteitis, with contractions and mutilations of various degrees, may also complicate lupus, although Crocker says that such accidents are not the direct result of the lupus, and rarely occur except in those markedly strumous. It is nevertheless true that lupus may coexist with tubercu-



lous lesions in joints, bones and glands. It remains to add that there may be grafted on this already terrible disease one more terrible, and that epithelioma often develops on a lupous patch or in the scar of a preceding lesion.<sup>1</sup>

In the great majority of instances, aside from the result of interference with local function, lupus seems to be without prejudicial effect on the general health. As will be shown presently, however, secondary tuberculous infection is more common than is generally supposed.

Lupus vulgaris is rare in this country, as compared to the continent of Europe, and even here it is more frequent at the seaboard with its foreign population than in the interior and among the native born. For some unknown reason it attacks females oftener than males.

Lupus usually begins in the first decade of life, and rarely commences after puberty, although there are some exceptions to this rule. Owing to greater crowding and other favoring influences, it is more apt to be found among the poor than the well-to-do, although no social class is exempt.

Careful inquiry shows that a history of phthisis may often be elicited among other members of the family of a lupous patient, and abundant statistics are at hand to prove that secondary tuberculous infection is unusually frequent.

Leloir regards the enlargement of glands contiguous to lupous patches as often distinctly specific, and not merely irritative. Although presenting marked clinical differences, the connection between the so-called scrofuloderma—and, in fact, the state generally—is undoubted.

Many carefully recorded cases are in evidence to show that lupus may result from direct inoculation. For example, in a case observed in my clinic by Dr. Hersman, a woman, who accidentally made a blister on her cheek while cooking, was inoculated by tuberculous sputum from her husband's handkerchief, with the result of producing a typical lupus vulgaris.

<sup>1</sup> Dubois-Havenith observed the development of epithelioma in 5 out of 118 cases of lupus.



As lupus usually occurs in exposed spots, it has been thought that cold acted at least as a predisposing cause, but it is likely that the greater liability of the face and hands to infection would be a more satisfactory explanation. Lupus has been noted to start in scars, wounds, herpetic vesicles (Crocker) and other breaks of continuity in the skin.

Lupus vulgaris is now generally conceded to be essentially a tuberculosis of the skin, and the anatomical changes that occur are due to the presence of the tubercle bacillus. The bacilli, however, are very sparse, and often a large number of sections must be examined before their presence can be demonstrated. Gilchrist and Stokes<sup>1</sup> have reported a case, occurring upon the face of a man aged thirty-three, which bore a close resemblance to lupus vulgaris, but in which no tubercle bacilli were to be demonstrated; they found, however, in the tissues a species of oidium. It is not clear that the growth may have been secondary.

If one examine a fresh nodule of lupus the epidermis will be found normal. In the papillary body or deeper in the corium a miliary tubercle is found sharply differentiated from the surrounding tissues. This is formed by a round cell infiltration which commences around the vessels of the corium. The central portion of such a mass of round cells undergoes coagulation-necrosis, while at the periphery are new formed vessels. In the central part of the mass the so-called giant cells are to be found. By proper staining in sections of lupous tissue tubercle bacilli can be demonstrated, generally lying in the periphery of the giant cells, but they are very few and often many sections will be examined before they are found. By the growth of the lupous tubercles and by the formation of new ones the deeper parts of the skin and the special organs which it contains are gradually destroyed. Even muscle and cartilage come to be involved. The epidermis over the tubercles may become gradually thinned till it gives way and an ulcer is formed, or it may take on an

<sup>1</sup> Bulletin Johns Hopkins Hosp., July, 1896.



exaggerated growth over the corium, the resistance of which is diminished, and carcinoma may thus be engrafted upon a lupous base.

**DIAGNOSIS.** In typical cases the diagnosis presents few difficulties; the history of the case, the disease beginning early in life, its great chronicity, and the presence of the characteristic reddish-brown, apple-jelly, readily broken-down tubercles are not easily misinterpreted. There are several ulcerative diseases, however, that at times bear a tolerably close likeness to lupus. The tubercular and serpiginous syphilides are especially to be differentiated. Lupus begins in early life, and is apt to be definitely localized. Syphilis as usually seen dates from adult life, and the lesions are more widely dispersed. Lupus is chronic in its course; syphilis much more rapid—doing more harm, in fact, in six months than lupus in as many years; or, as Payne has it, lupus is to syphilis as the hour-hand is to the minute-hand of a clock. Lupous nodules are set deeper in the skin, are reddish-brown, and readily break down; the tubercles of syphilis are pinkish-red, firmer and less irregular in outline. Lupous tubercles often redevelop on the scar left by the disease; syphilitic tubercles rarely if at all. The ulcers of lupus are not so deep and clear cut as those of syphilis. The secretion from lupous ulcers is scant and inodorous; from syphilis purulent, abundant and offensive. The crusts of lupus are thin and reddish; the crusts of syphilis, thick, greenish-black and have the oyster-shell arrangement. The scars of lupus are thick, band-like and adherent; in syphilis they are thin, soft and movable (except in the neighborhood of joints). The osseous tissues are not implicated in lupus; they may be attacked in syphilis. Finally, it is always possible to apply the test of treatment.

Epithelioma might form a source of some confusion, but it must be remembered that lupus begins in early life; cancer of the skin is a disease first occurring in the majority of cases in middle age. Lupus will probably exhibit several points of ulceration, and the lupous nodules may be dem-



onstrated; in epithelioma the ulceration starts from a single point, and no apple-jelly lesions are to be seen. In lupus the ulceration extends more superficially than in epithelioma. In lupus the edges of the ulcer are soft and regular, while the edges of the epitheliomatous ulcer are hard and everted, and the base is uneven and secretes a thin sanguinolent fluid. It is to be remembered that epithelioma may develop on a lupus.

The ulcerations left by broken-down glands and the accompanying chronic inflammation of the skin in their neighborhood may suggest lupus, but the absence of lupous nodules, the presence of sinuses and enlarged glands elsewhere would be sufficiently distinctive.

Lupus erythematosus is usually symmetrical, commences later in life, and is much more rapid in its course than lupus vulgaris; besides, there are no ulcerations and no apple-jelly nodules in the first-named trouble, and the scales are fatty and dip down into the sebaceous orifices.

Crocker<sup>1</sup> regards tuberculin injections as a valuable aid in diagnosis. Two milligrams may be first tried, and then .005 or even .01 gr., and the smaller the dose that produces local and general reaction the more likely is the disease to be lupus vulgaris. A large dose (.01) may perhaps produce slight local reaction in lupus erythematosus, but not in syphilis or epithelioma. It is of no diagnostic value in lepra or scrofuloderma, because, according to the same authority, the distinction between lupus vulgaris and the latter is of no practical importance, while lepra may react altogether too violently.

Acne rosacea and leprosy should also be considered in establishing a definite diagnosis.

Erythematoid lupus vulgaris bears a strong likeness to lupus erythematosus, but the presence of lupous nodules and the other features already mentioned above should be sufficient to prevent mistakes.

TREATMENT. Persons suffering from lupus may often be greatly benefited as to their local condition by appro-

<sup>1</sup> Diseases of the Skin, 2d ed., 1894.



priate hygienic and general treatment ; that is to say, while no manner of internal medication will cause the disappearance of an existing infiltration, it may be made more amenable to appropriate local measures, and display less destructive tendency and less proneness to relapse. On the other hand, cases are not infrequently encountered in which there is no apparent demand for internal medication, the patients possessing perfect general health. The two remedies of greatest value are cod-liver oil and iodine or iodide of potassium. The oil should be pushed to the limit of tolerance. Iodide of potassium is regarded by many as of especial value, and Liveing speaks well of iodine in two- or three-drop doses, combined with Fowler's solution or the syrup of the iodide of iron.

The specific treatment of lupus with tuberculin has not come up to the expectations of its early advocates, nor, on the other side, is it absolutely as valueless as some have presumed. Morris in his recent text-book says that a course of tuberculin injections should be preliminary to the treatment of lupus by any of the local methods, as it seems to make the disease more amenable to these measures. Crocker says that it will remove the fibroid thickening that is often seen about the lips and where there is much lax tissue, and that, moreover, after as much lupous tissue has been removed by erosion as possible it will dissipate some of the tissue that has escaped destruction from without, and in this way secure a longer period of abeyance and a greater degree of permanent cure. Ravogli esteems tuberculin highly and prefers the old to the new. It is rather early to judge definitely of the value of Koch's new tuberculin, but it must be said that as regards permanency of result the reports are not altogether flattering.

Thiosinamine has been recommended by H. von Hebra for a similar purpose. As to its permanent effect upon the disease, very little can be said, but there seems to be little doubt as to its value in removing cicatricial thickenings, and thus restoring the mobility of joints and other parts. Intercurrent attacks of erysipelas have also a de-



cided influence over the lupous process, as I can testify from experience, but the best authorities oppose the intradermic injection of erysipelas toxins (Besnier, Thibierge).

The action of drugs having a marked local reaction perhaps produces similar results. Quite recently Branwell<sup>1</sup> has got surprising amelioration in lupus from thyroid feeding, but it would appear that the hopes in this direction have not been realized.

Whatever may be the future of the internal treatment of lupus, it remains that local measures of relief are paramount in importance. The object of local treatment is to remove the diseased tissue, and, incidentally, to accomplish this with as little deformity as possible. The measures, medical and surgical, recommended to attain these desirable ends are almost numberless. In the choice of a method the surgeon must take into account the stage, the extent and location of the disease, and must be well acquainted with the effects that will follow upon a particular operation.

In a small proportion of cases soothing remedies are useful and tend to promote involution of the disease. On non-ulcerated surfaces Crocker recommends the familiar calamine-and-zinc lotion, and where the skin is unbroken the writer has seen benefit from the unguentum vaselini plumbicum, to which has been added about ten per cent. of aristol or iodoform, preferably the former. In superficial forms of the disease Brooke's<sup>2</sup> ointment does excellent service, and acts much better than the usual mercurial plasters:

R. Hydrarg. oleatis ( $2\frac{1}{2}$ –5 per cent.),  $\bar{\text{ss}}$ j.  
 Acidi salicylici, gr. x–xv.  
 Ichthyolis,  $\text{m}$  xv.  
 Olei lavandulæ, q. s. M.

S. Rub in with steady friction ten to twenty minutes morning and evening.

<sup>1</sup> Brit. Med. Journ., Apr. 14, 1894.

<sup>2</sup> Brit. Jour. Dermatology, May, 1890.



The skin must not be broken by the application ; if, however, this should occur, the salve must be diluted or the parts dressed with a little boric acid salve until it has reformed.

When the infiltration is considerable, Riehl first cleanses the parts with soap and water, and then brushes on a solution of caustic potash, five parts, in distilled water, ten parts. This is left on until the epidermis becomes macerated, when it is washed off with water, and the iodoform is thickly strewn on and kept in place for several days.

Recently Mr. Lane<sup>1</sup> has called attention to the value of sulphur in the treatment of lupus, the drug being used in powder or as an emulsion with glycerine, and Harrison recommends saturating the lupous surface with a solution of hyposulphite of sodium (forty gr. to one oz.), followed by a lotion of five drops of undiluted hydrochloric acid to the ounce of water. It is said that nascent sulphurous acid is produced in this way in the tissues.

Salicylic acid was introduced some years ago by Marshall, and of late has been much lauded by Unna and Jamieson. It may be used, as suggested by Treves, made into a cream with glycerine, to which is added a small amount of creasote, or in the shape of Unna's plaster mulls. These plasters may be renewed once, or, where there is much exudation, twice daily. They are made of different strengths, and Jamieson recommends that the treatment should be begun with as strong a plaster as the part will bear. The incorporation of the creasote with the salicylic acid materially lessens the pain. The results obtained are often very satisfactory, but, as in most other procedures, new nodules are apt to develop, and these must be destroyed in the manner presently to be described. Among the more decidedly caustic remedies may be mentioned Cosme's paste as modified by Hebra, nitrate of silver in stick or solution, a paste of chloride of zinc and lactic acid. This latter may be used for small ulcerations and lupus of the mucous membrane.

<sup>1</sup> London Lancet, April 7, 1894.



Pyrogallic acid has a selective action for lupous tissue, and if not used over too extensive a surface gives excellent results. It may be applied as a ten per cent. ointment or plaster mull, or, as employed by Besnier, as a saturated solution in ether. In the latter case it should be covered with traumaticine, and the operation repeated until all nodules have disappeared.

White and Hyde in this country speak highly of the use of bichloride of mercury in solution or ointment of the strength of one or two grains to the ounce. Hyde says that this treatment is "in many cases brilliantly successful," but I have met with no such results.

A ten per cent. solution of permanganate of potassium painted on daily, or every other day, is recommended by Schultz. The nodules break down under these pencilings, and, it is claimed, can be readily wiped away with absorbent cotton. Among other recent methods of local treatment may be mentioned injections of camphorated naphthol (Moty) and potassium cantharidate (Branthomme). In this place may be also mentioned the fact that calomel injections have received favorable notice from various sources. Asselberghs used five centigrammes of calomel in 1 c.c. of sterilized oil, beginning with one injection every ten days, but later increasing the interval. The local reaction is said to be quite severe.

Although the various procedures related above have their place at one time or another in the treatment of lupus, and under some circumstances are to be preferred, it is nevertheless true that the mechanical means of treating the disease have largely superseded them.

The range of employment of excision is small. Its use is mostly limited to small patches, or it may be more boldly used in situations like the limbs or trunk where a scar is unimportant, and where skin grafting after Thiersch's method may be employed. It is only fair to say, however, that Lang, Schultze and others regard excision in the most favorable light. Besnier is much opposed to bloody operations in lupus, fearing general



tuberculous infection, and therefore advocates the use of punctate and linear operations with galvano-cautery knives and points of various shapes. The Paquelin cautery can also be employed for this purpose.

Multiple punctiform scarification is now but little used, either as an original procedure or as supplementary to erosion. Linear scarification, which consists in making a series of parallel cross cuts from  $\frac{1}{16}$  to  $\frac{1}{8}$  inch in depth, with the object of destroying the nutrient vessels of the part, is a far superior operation, and, while excessively tedious, is capable of producing very satisfactory results, although relapses are just as common after it as from any other operation. Fox says that for ulcerating lupus of the nose it is superior to other methods, as it is not apt to be followed by any deformity.

Electrolysis,<sup>1</sup> which I have used many years, gives good results in limited patches. The single needle is preferable to the flat plate of Lustgarten. Cocaine anaesthesia may be employed for larger patches.

Probably the most thoroughly trustworthy and universally practicable procedure in the largest number of cases is by erosion with the sharp spoon or dermal curette, as originally advised by Volkmann. Local anaesthesia may be produced or the patient put under ether. The hand soon learns to distinguish between healthy and diseased tissues, especially as the latter come away rapidly. Hemorrhage is easily controlled by pressure with absorbent cotton. The after treatment of the scraped surface varies with different operators. Volkmann was in the habit of making multiple punctures, so as to ensure complete destruction of all suspicious points. Crocker's plan where there is much cicatricial tissue is to mop on strong carbolic acid, or, if the disease is on the limbs, to apply strong sulphuric acid with a piece of wood, and then neutralize with bicarbonate of soda. Boric lint or sal-alambroth wool is then bandaged firmly on to stay the bleeding, and replaced in a few hours with wet boric lint

<sup>1</sup> Manual of Skin Diseases, 1890.



covered with oil silk, and after a day or two the wound is dressed with boric acid salve. This same excellent authority states that he gets better results where tuberculin has been injected as an after treatment till the wound heals. Mr. Morris says that Sir Joseph Lister, after scraping and the cessation of hemorrhage, fills up the holes with fuming nitric acid, followed presently by a neutralizing solution of soda. The wound is then dressed in the usual way. T. C. Fox uses a cream of chloride of zinc in spirit for the same ends and Jamieson goes over the surface with a probe on which has been fused some chromic acid—a plan of which I can speak highly.

Jarisch first recommended a ten per cent. pyrogallol salve after curetting, to be followed in some days by iodoform, and when healing began the application of mercurial plaster to secure a good scar. G. H. Fox uses a much stronger salve—twenty-five to fifty per cent.—as it shortens the duration of the treatment, and is decided in his recommendation of this mixed method. In the treatment of small patches I have been in the habit of using a thorough electrolysis, followed by curetting and the subsequent application of chromic acid. It is even well in very large patches to first electrolyze the borders before curetting.

Recurrent nodules may be destroyed in a variety of ways—viz., by electrolysis, the dental burr of Fox, the double screw of Morris, or by boring in with a match dipped in acid nitrate of mercury or the crayon of nitrate of silver.

**PROGNOSIS.** A very guarded opinion must be expressed in regard to the prognosis of lupus, for under any form of treatment now known relapses of the process are the rule. Naturally, also, the various circumstances of age, location, acuteness, extent and duration must be taken into account. The results of treatment are more satisfactory in elderly people than in the young, and limited superficial areas of the disease may be permanently cured. Although lupus is exceedingly chronic in its course, often lasting twenty or thirty years, it is rarely inimical to the



general health, certainly in this country, but it would seem from foreign statistics that general tuberculous infection is more frequent than was formerly supposed.

### SCROFULODERMA.

To be thoroughly consistent and in accord with modern pathological ideas, it would be well to include under the general head of tuberculosis of the skin not only the scrofulodermata, but lupus, as well as tuberculous disease of the skin proper; but although both etiological and anatomical identities must be recognized, at the same time wide clinical divergencies must be acknowledged, and for this reason, in a work of this sort, I have thought it wiser to adhere to the older classification.

The most frequently encountered form of scrofuloderma has its origin in the lymphatic glands in the neck, and more rarely in the axillary and inguinal regions. The glands may be felt under the skin as numerous, tolerably firm and movable bodies, which grow but slowly and are always indolent. Sometimes several glands attain a considerable size—an inch or more—or a conglomeration of glands may be detected, but, it is said, without becoming fused or matted together (Eve). The glands may remain as indolent nodules for an indefinite period, or they may undergo resolution without suppuration.

Suppuration is, however, the usual termination of the process, the overlying skin meanwhile becoming thinned and of a violaceous color. When the abscess bursts it emits a thin, curdy pus, more or less mixed with blood. Sinuses and fistulous tracts form, the skin is undermined and perforated and strumous ulcers are developed.

The ulcers are oval or linear in outline, presenting purplish and undermined edges, and the floors of the abscesses are covered with pale, unhealthy granulations. The secretions from the ulcers form thin, light-colored crusts. The cicatrices that result from the healing process are bound down to the underlying tissues, ridged and knotty and often hypertrophic. The course of the affec-



tion is exceedingly slow, ulceration and repair going on hand in hand for months.

There is also a variety of scrofuloderma—the so-called scrofulous gumma—which begins in the form of bean-sized nodules that gradually enlarge to hazel-, or walnut-sized tumors, and are unaccompanied by subjective symptoms. They may or may not suppurate; in the former case there will be present typical strumous ulceration, or, on the other hand, their contents may be resorbed. These gummata may also occur along the course of the lymphatics of a limb (Hallopeau).

The disorder is observed in both sexes. It is very common among negroes in this country. Scrofula is a disease of early life, although it may occur in aged people. A favorable condition of the system for the development of scrofula may result from hereditary influences or may be acquired by various direct and indirect means—*e. g.*, unwholesome food, exposure, the depressing effects of constitutional diseases, such as exanthemata, and, finally, the exciting agency of chronic inflammation and local injury.

**DIAGNOSIS.** Scrofulous ulcerations are to be distinguished from those of syphilis by the presence of concomitant symptoms of scrofula and absence of those of the last-mentioned disease, by the history, the course, the location and, finally, by the ulcer itself, with its violaceous border, watery secretion, thin crusts and the non-infiltrated borders. Lupus vulgaris with its apple-jelly nodules should also be differentiated.

**TREATMENT.** The constitutional treatment of the scrofulodermata should be directed to the improvement, in every way possible, of the patient's nutrition.

Cod-liver oil, malt, iron, especially the syrup of the iodide, the hypophosphites, and the lactophosphate of lime are all valuable remedies. Arsenic is praised by Buchner and Eve. Good nourishing food, appropriate exercise, well-ventilated sleeping apartments, residence in the country or at the seashore, together with all other suitable hygienic measures, are of the utmost importance.



Treves very wisely states that in treating any case of gland disease the first rule is to remove all sources of peripheral irritation—viz., disorders of the eye, mouth, pharynx or skin. To promote resolution this authority highly recommends the unguentum plumbi iodidi.

Ringer, Crocker and others advise sulphide of calcium for the multiple cold abscesses. Crocker especially recommends chaulmoogra oil in the form of an emulsion in from ten- to thirty-minim doses, and an ointment externally. G. H. Fox has seen good results from the internal use of iodide of starch in strumous subjects. Broken-down glands, sinuses and ulcers should be thoroughly curetted, touched with pure carbolic acid, and afterward dressed with iodoform. Treves uses a fine point of the thermocautery, which is thrust through the skin into the substance of the gland, and is passed in several directions through the gland tissue before it is withdrawn. Excision gives good results in suitable cases; that is, in those instances in which there are present two or three movable and superficially seated glands, or in chronic circumscribed enlargements that have resisted other methods of treatment (Eve).

Associated with the ordinary expressions of the scrofulodermata may be found lupus vulgaris, tuberculous dactylitis, and certain forms of cutaneous disease, as lichen scrofulosus, various pustular eruptions and the erythema induratum of Bazin.

In an interesting and valuable article<sup>1</sup> James C. Johnston groups a number of these so-called scrofulides under the general name of the Paratuberculoses, retaining the classical scrofuloderma among the true tuberculoses. Several of these conditions will now be briefly described.

### Pustular Scrofulides.

Duhring describes a cutaneous manifestation which consists of one or more large flat pustules, seated upon an in-

<sup>1</sup> Am. Jour. Med. Sci., Nov., 1897. This classification is to be commended for its pathologic reasonableness, but the scheme of arrangement adopted in this work does not permit its present employment.



flamed or violaceous base. The crust forms slowly, is thin and flat, of a brownish color. The ulceration beneath has the "peculiar scrofulous character," although the scars are soft, flat and superficial. The same observer calls attention to another variety of disease, observed in scrofulous subjects, which declares itself in the shape of small pin-head to pea-sized, disseminated, yellowish papulo-pustules, upon a base similar in character to that found with the large pustular lesion just mentioned. The lesions occur for the most part on the face and extremities and leave punched-out, variola-like scars. The process may continue for years.

#### Lichen Scrofulosus, or Scrofulosorum.

This disorder is exceedingly rare in this country, and I can recall in my own experience but one undoubted case. The following description is condensed from Kaposi's textbook. The eruption is made up of pale-red to brownish or livid red papules, millet-seed to pin-head sized, arranged in groups and patches varying in circumference from a dime to a dollar, and also here and there presenting circles and curves. The lesions are capped with a small scale and more rarely with a minute pustule. There is but slight pruritus. They remain for years almost unchanged, then finally undergo involution, with slight desquamation and fading color and show no evidence of their previous existence. The usual seat of the eruption is the trunk, back and abdomen. In the beginning the patches are isolated, but later adjacent groups may coalesce and give the appearance of a diffuse disease, at whose borders the skin is of a dirty-brown color and covered with thin detachable scales. But even under these latter conditions the original grouping and lesional features may be demonstrated. About the openings of the sebaceous glands there are also, as already stated, papules arranged in circular lines. Rarely, through involution and evolution of the papules, serpiginous forms may be observed; after months similar lesions appear on the flexor sides of the upper and lower



extremities and also on the face. In some cases eczematous and pustular eruptions may arise as complications and besides nodules and pustules surrounded by a hemorrhagic areola may appear on the lower limbs. Some ninety per cent. of these patients suffer from glandular swellings and other scrofulous manifestations. The majority of the cases occur at or before puberty. Recent observers, as the result of their histological investigations, look upon this affection as a cutaneous tuberculosis, which view, however, Kaposi does not accept, while admitting that persons suffering from it are usually scrofulous. It is doubtful that this disorder and the other "paratubercular" diseases are due to direct bacillary inoculation, but probably originate from the toxin of tuberculosis (Hallopeau).

The disorder should be differentiated from papular eczema and the small papular syphilide; in the former complaint the papules are brighter red and itchy and without the special localization of l. scrofulosus, while in the latter the lesions are not arranged in groups, but in circles, are hard and shiny, and affect the flexor surface of joints.

The treatment consists in the internal use of cod-liver oil, with or without iodide (iodi pur., 0.15; olei morrhuaë, 150.0; tablespoonful night and morning), and theunction several times daily of cod-liver oil. Under this management improvement is rapid.

### **Erythema Induratum.<sup>1</sup>**

Under the name of erythema induré des scrofuleux Bazin originally called attention to a disorder that is most frequently seen in young girls of a scrofulous habit. The disease first shows itself in the shape of several hard indurations of the skin, which can be more easily felt than seen. These nodules are generally found on the legs and especially just below the bulge of the calf. When a number of lesions are present they may coalesce into brawny

<sup>1</sup>See especially T. C. Fox, Brit. Jour. Derm., Aug., 1893. With illustrations.



patches. In the course of time the skin over the lesions becomes red and then violaceous. Involution may take place after a considerable period, or else the indurations slough out, leaving indolent ulcers that are slow in healing. There are no symptoms of constitutional disturbance, but often severe pain in the limbs. Its chronicity, the small number of nodules present at first, and the absence of systemic disturbance, distinguish this disorder from erythema nodosum. The disease is most often mistaken for syphilitic gummata, but the absence of a specific history and concomitant symptoms, the evolution of the disease, and the failure of anti-syphilitic treatment, usually suffice for the diagnosis.

The treatment consists in rest in the horizontal position, the administration of cod-liver oil or malt extract with hypophosphites and proper bandaging. The ulcers may be dusted with aristol or other similar powders. Anti-syphilitic treatment does more harm than good.

### LUPUS ERYTHEMATOSUS.

Lupus erythematosus is a cellular infiltration of the skin, characterized by erythematous scaly patches of various sizes and shapes, generally decked with grayish or yellowish adherent scales, and displaying a tendency to superficial scarring.

There are several clinical varieties of the disease recognized by authors. By far the most common is the discoid or circumscribed form, in which the primary or eruptive lesion is from a pin head to a pea in size, slightly raised, and which presently becomes covered with an adherent scale that dips down into a dilated sebaceous duct. These spots may be isolated or grouped, few or many, but gradually, by peripheral extension and coalescence, they come to make variously sized and shaped, erythematous, scaly patches that are characteristic. The patch is pinkish, reddish or purplish in color, and the surface is in some cases covered with scanty adherent scales, or else with thick, yellow and sebaceous-looking crusts, or in still other in-



stances the lesions are frankly erythematous and free of scales. The patch spreads peripherally, and finally exhibits a depressed, atrophic center, with a raised border, studded with comedones or showing small patulous openings. There may be one or more such lesions present, varying in size from a pea to that of the palm.

The progress of the disease is usually very slow, often extending over years, but occasionally the evolution is much more rapid. After awhile the affection ceases to spread and comes to a standstill, or involution may be complete and nothing remain but a superficial or deep, usually punctiform, scar. When hairy parts are affected the hairs fall out as the result of follicular atrophy. The usual seat of the disease is upon the face, especially over the bridge of the nose, and also the tip and alæ, on the cheeks, eyelids, scalp and ears. One of the most characteristic types of the affection is exhibited in the so-called butterfly or bat-like form, produced by coalescence of patches on the bridge of the nose and on the cheeks under the eyes. Other parts of the body may be affected, and attention has been called to lupus erythematosus of the hands and feet and also of the mucous membrane of the mouth.

The subjective symptoms are not marked and, at the most, consist of slight burning or itching. In the ordinary forms of the disease, to which the description just given applies, the patients are in the enjoyment of general good health.

In the form of the disease called lupus erythematosus disseminatus there are many aggregated or discrete, usually erythematous, primary eruptive spots, which, unlike the discoid variety, spread by the multiplication of these lesions, and not by their coalescence; and thus by the appearance of new patches among the older large surfaces may be involved and almost any part of the body occupied by the eruption.

Grave constitutional and local disorders may complicate this affection, and a fatal termination has ensued in a large



proportion of the cases. I have reported two instances of this formidable disease, both ending in death.<sup>1</sup> There is a strong suspicion in my mind that these cases, like some of the discoid forms, especially the indurated unsymmetrical variety—the *lupus érythémateux fixe* of Brocq—are really examples of cutaneous tuberculosis.

Crocker<sup>2</sup> describes a telangiectatic and a nodular form. In the first-named variety there is a chronic, erythema-like redness, due to dilatation of vessels, accompanied by considerable infiltration and later by superficial scarring. It may be single, but usually occupies both cheeks. The second, or nodular variety does not present a very definite clinical picture, and would seem to consist of brownish-red nodules, not unlike *lupus vulgaris*, but which from their course and general behavior bear a resemblance to *lupus erythematosus*. This same excellent observer in a recent article<sup>3</sup> relates a number of cases in which *lupus erythematosus* imitates more or less closely such different affections as psoriasis, lichen planus, erythema, *lupus vulgaris*, etc.

*Lupus erythematosus* is much more common in women than in men, and usually first makes its appearance between the ages of eighteen and forty, although a few cases in children have been recorded. The etiology of the disease is very obscure, but it is likely that both debilitating influences and local irritations predispose to it. For example, Hutchinson says a history of phthisis in the family is often obtainable, and it would seem that uterine derangements and chlorotic states often exist as antecedents or complications; and, moreover, heat and cold and the various agents that dispose to seborrhœa are undoubted exciting causes.

Morris is emphatic in his belief that it is in no way akin to the tuberculous process, but concludes that *lupus ery-*

<sup>1</sup> Jour. Cutan. Dis., Dec., 1889, and July, 1892.

<sup>2</sup> Diseases of the Skin, 2d ed., 1893.

<sup>3</sup> “*Lupus Erythematosus as an Imitator, etc.*,” Jour. Cutan. Diseases, Jan., 1894.



thematosus must be regarded as a chronic inflammation of the skin, local in its origin, and generally local in its course, unconnected, as far as our present knowledge goes, with any underlying constitutional state. It is true that certain physicians do not share this opinion, and look upon lupus erythematosus as directly or indirectly tuberculous; still by far the greater number of dermatologists regard it as a local disorder.

We have, however, to explain the disseminate erythematosus lupus of Kaposi, a malady that in the beginning is of the ordinary type, but which later becomes widely spread, is complicated by formidable general and local symptoms, and not uncommonly ends in death; but, as stated before, this type is probably tuberculous.

Finally, it remains to point out that there are a number of morbid processes that closely simulate lupus erythematosus which are really anomalous forms of cutaneous tuberculosis; and this fact has undoubtedly given rise to much of the confusion that exists on this subject. These forms will be considered presently under Diagnosis.

The changes found in tissues affected with lupus erythematosus are of an inflammatory nature. Collections of cells are seen around the follicles and glands of the skin, the vessels are dilated, their walls proliferating, and around them are extravasations of round cells. The gland cells take part in the proliferation, producing seborrhœal plugs. Externally the inflammatory products may be absorbed, leaving the skin normal, or degeneration of the cells occurs with atrophy of the organs of the skin and the formation of scar tissue. Holder states that there is a capillary thrombosis in the patches, which would account for certain of the conditions present.

**DIAGNOSIS.** The diagnosis of lupus erythematosus in its ordinary discoid form presents no great difficulty, particularly if the following salient points be taken into consideration, viz., the age of the patient—between eighteen and forty-five; the sex, generally women; the situation of the disease, usually the upper part of the face, and gen-



erally the ears; and, finally, the defined border studded with comedo plugs, the adherent scales and the central scarring.

Acne rosacea at times bears a close resemblance to lupus erythematosus, but the presence of papules and pustules, and the ramifying vessels in the former, with the defined edge, the adherent scales and the cicatriform center of the latter, should prevent confusion; besides, in lupus erythematosus the eruption is often found on the ears. Lupus vulgaris, with its brownish infiltrations deep in the skin, its suppuration, ulceration and thick cicatrices, should be easily excluded. Moreover, lupus erythematosus is a disease of adult life, while lupus vulgaris dates usually from childhood.

Chilblain, psoriasis, ringworm and some forms of syphilis more or less closely resemble lupus erythematosus at times, but due attention to the features of the disease already given should prevent error in diagnosis. There is no question that lupus erythematosus has heretofore been confused with the erythematoïd lupus vulgaris of Leloir, and this, besides, has caused many to believe that the former was in reality a cutaneous tuberculosis; but notwithstanding the close resemblance<sup>1</sup> time and attentive observation will clear up the diagnosis.

There are undoubtedly other forms of skin tuberculosis that bear a close likeness to lupus erythematosus, as in my case recently reported,<sup>2</sup> and in their early stages at least it will be necessary to resort to the microscope for a definite demonstration.

**TREATMENT.** The internal treatment of the disease consists for the most part in the employment of remedies to improve the general health or for the correction of obvious complications. Some observers think they have seen good results from the direct action of certain drugs on the disorder itself. For this purpose arsenic, ichthyol, iodide of starch and phosphorus have been recommended.

<sup>1</sup> For full description see the section on Lupus Vulgaris.

<sup>2</sup> Am. Jour. Med. Sci., April, 1894.



Bulkley<sup>1</sup> claims brilliant results from the last-mentioned agent given in solution as follows :

R. Phosphorus,	gr. vj.
Absolute alcohol,	℥xxx.

To be dissolved with the aid of heat and agitation, and then mixed, while still warm, with the following mixture, also warm :

Glycerine,	℥ixss.
Alcohol,	℥jss.
Essence of peppermint,	℥ss.

The dose is fifteen drops in water, taken quickly to prevent oxidation, three times a day after meals, and gradually increased to forty-five or fifty drops. The value of the phosphorus treatment has been confirmed by other observers. Legrain employed injections of sheep serum successfully in a case, using two injections of ten cc. at intervals of five days.

The local treatment is, however, of far greater importance, and, according to the symptoms present in a given case, may be soothing, stimulating or destructive. For the first purpose the calamine and zinc lotion, to each ounce of which may be added ten minims of liq. carbonis detergens, is admirably adapted. Often by such mild measures patches may be made to disappear without subsequent scarring. In other cases of a more chronic character, but where the infiltration is moderate, various astringent applications may be tried. Duhring's lotion of sulphate of zinc and sulphide of potassium is very valuable.

R. Zinci sulphatis,	
Potassæ sulphuratæ,	āā ℥ss.
Aquæ rosæ,	℥iijss.
Alcoholis,	℥iij. M.

S. Mop on morning and evening for ten or more minutes at a time.

Some years ago I saw a superficial, but very diffuse, case get well in six weeks under this treatment, although

<sup>1</sup> Am. Jour. Med. Sci., April, 1893.



the disease had been in existence for more than a year and various remedies had been unavailingly employed. To this day there has been no relapse. Another remedy that I have occasionally used with good results is the often quoted combination of salicylic acid and sulphur.

R.	Acidi salicylici,	℥ss.
	Sulphuris præcip.,	℥j.
	Vaselini,	℥j. M.
S.	Rub in vigorously twice daily.	

In old patches, the application of the salicylic acid plaster mull helps matters very much, and I often apply it before commencing with the salve just mentioned.

Other valuable topical remedies may be referred to in addition; for, as Kaposi remarks, no one application can be depended upon for all cases, or even for the same case at different periods of its progress. Hebra recommended for comparatively recent small lesions, situated on thin parts of the skin, that the surface should be rubbed with the spirit of soap, followed by some emollient salve. The green soap alone may be used for this purpose, or it may be spread as a plaster on flannel. Simple collodion, or collodion to which ten per cent. of resorcin has been added, may also be recommended. Kaposi speaks highly of emplastrum hydrargyri (German formula). In cases having hard, horny scales Veiel prefers chloracetic acid. It is put on with a glass rod, and soon produces a white eschar, and into this is bored a pointed glass rod dipped into the acid.

The method of multiple linear scarifications is of especial value, and is to be preferred to the use of strong caustics. For this operation one may employ any of the knives made for this purpose, preferably Pick's modification of Veiel's, Squire's or Van Harlingen's. Parallel incisions are made that are about one-sixteenth of an inch apart, and these are crossed by another series, and even a third. The parts should be first frozen with rhigoline spray, and the hemorrhage that follows may be checked by pressure with absorbent cotton and the wound dressed with iodoform. It



is well to operate on limited patches at a time, and usually it is necessary to repeat the operation several times. Vidal employs a single blade of peculiar construction, and makes what is termed quadrilateral linear scarifications.

Many years ago the writer employed and recommended electrolysis in suitable cases, and an extended experience has confirmed him in his good opinion of this method. It is especially useful in chronic infiltrated patches, and if carefully done need not produce any great amount of scarring. Even in tolerably recent lesions a more or less superficial tattooing with the electrolytic needle will cause their disappearance without any noticeable destruction of the skin. Both the galvano-cautery and the Paquelin cautery have also been successfully employed.

Schutz recommends a weak solution of arsenic, 1 in 400 to 600 or Fowler's solution in one-fourth or one-sixth of its strength, for local use. This may be painted over the patches twice a day, but in about a week or even in less time as I have found, the affected parts become irritated, in which event the applications should be intermitted and a simple, protective paste applied. The lotion and the paste may be then alternated for several weeks. Schutz claims to have effected a cure in a number of cases on an average of eleven weeks' treatment. This method is worthy of trial in cases characterized by a certain amount of infiltration, but not in acute conditions.

PROGNOSIS. Prognosis should always be guarded, as the disorder runs a very variable course, and a plan of treatment that is very successful in one case will be of no effect in the next. Some of the superficial forms of the disease are quite amenable to treatment, and in the more chronic patches, even if a cure cannot always be accomplished, decided amelioration may be secured. Relapses may be expected. The disseminated form is of grave import.

### SYPHILIS OF THE SKIN.

Before entering upon a description of the particular varieties of eruption that are found upon the skin in



syphilis, it will be well to take a brief view of the syphilodermata as a whole, and to point out certain more or less characteristic features in their course and general characters wherein they resemble each other, and differ from the non-specific affections of the integument. Among the peculiarities of syphilitic eruptions most worthy of attention are the following :

**LOCATION AND CONFIGURATION.** Syphilitic eruptions may occur anywhere on the body, but the various special varieties would seem to have a preference for certain tolerably definite sites. For example, the early erythematous syphiloderm is usually to be found on the sides of the chest, abdomen, loins, the flexor surfaces of the arms and inner sides of the thighs ; papular lesions develop in the same localities, as well as upon the palms, soles, forehead, at the margin of the scalp and on the neck ; the pustular forms are observed in the same situations as the last-mentioned variety, but also on the legs and in the hairy parts of the face and scalp ; the rupial and ecthymatous syphilides affect the face and extremities ; the squamous lesions the palms and soles. Moist papules seek the mucous outlets ; tubercular lesions the forehead, the back of the neck and the shoulders, and the junction of the nose and cheek ; and the gummatous infiltrations are to be noted about the joints.

The early cutaneous manifestations are symmetrically disposed, and bear the character of a more or less generalized eruption ; but later, while the symmetrical arrangement is retained, a tendency to group and form circles and segments of circles is a notable and characteristic feature ; and the tardiest varieties lose the symmetrical disposition, and occupy comparatively isolated and limited regions.

**POLYMORPHISM.** The presence of many different elementary lesions at one and the same time, that is, macules, papules, pustules, etc., while seen in some of the simple disorders, if taken in connection with other phenomena, is of considerable diagnostic value.

**COURSE.** Syphilis is essentially a chronic disease, and



the syphilodermata lack the inflammatory features of the non-specific eruptions. The different primary forms also exhibit a tendency, by a process of evolution, to develop into other forms, *e. g.*, from a papule into a tubercle, and the latter may undergo a purulent degeneration.

**COLOR.** Syphilitic eruptions are by no means always of the same shade of color, this feature varying much with the age of the lesions, their locality, etc., but they may be said as a general thing to possess a ham or copper color, especially in the large papular and tubercular varieties of lesion, and while other skin diseases may show this tint in some instances this symptom must be given due weight in differential diagnosis. The pigmentation left after the subsidence of syphilitic eruptions is not peculiar to this disease, being seen in lichen planus and upon the lower extremities after eczema; but it possesses somewhat more significance when situated on the trunk or upper limbs.

**ABSENCE OF ITCHING AND PAIN.** A broad general rule of great value in the diagnosis of specific eruptions is the one relating to the absence of subjective symptoms, namely, itching and pain, and while this fact is by no means to be regarded as pathognomonic, there being some exceptions, it remains nevertheless one of our best differential points.

**OTHER PECULIARITIES.** Among other peculiarities of syphilitic eruptions attention may be called to the characters of the scales, crusts, ulcers and scars. The scales are a dirty white or grayish, are quite scanty, and do not possess the glistening aspect and imbricated arrangement seen in psoriasis, for example. The crusts are dark brown or have a greenish tint, are usually thick and rough; in rupia they are heaped up after the manner of an oyster shell. The ulcers of syphilis may assume various shapes, but the kidney-shaped and horseshoe form is quite characteristic. Their borders are generally sharply cut. Syphilitic scars are round or oval, and, except in the neighborhood of joints, quite soft and pliant, and not traversed by bands and cords. In old scars the white, glistening center and the peripheral ring of pigmentation may also be mentioned.



Finally, in establishing a diagnosis, it must be repeated that no one single symptom taken by itself will suffice in all cases and at all times ; on the contrary, the case must be studied as a whole, and the history and the concomitants, namely, the glandular enlargements, the mucous involvements, and such other local or general symptoms as may be present must be given due weight.

The following types of eruption will now be briefly considered :

1. Syphiloderma erythematosum.
2. Syphiloderma papulosum.
3. Syphiloderma vesiculosum.
4. Syphiloderma pustulosum.
5. Syphiloderma tuberculosum.
6. Syphiloderma gummatosum.
7. Syphiloderma bullosum.

#### **Syphiloderma Erythematosum.**

(Syn. *Macular Syphilide*, *Syphilitic Roseola*, *Erythematous Syphilide*, *Exanthematous Syphilide*, *Syphilis Cutanea Maculosa*.) The erythematous syphiloderm, or syphilide, is usually the earliest cutaneous manifestation, appearing in six or eight weeks from the development of the initial lesion. It is a generalized eruption, and may or may not be ushered in with marked systemic reaction. The favorite regions of attack are the sides of the chest, the lower part of the belly, the flanks and the flexor surfaces of the limbs. The face, backs of the hands and feet are generally spared. The eruption may come out in a single night, but as a rule it occupies eight or ten days in its evolution. The macules are of about the size of a silver ten-cent piece, sometimes larger or smaller, of a red color, which later becomes violaceous and finally pigmented. At first they may be made to fade on pressure, but afterwards they cannot be effaced. In shape they are round or oval, and have an indefinite outline ; they are never confluent ; at times the eruption is so faint that it can only be appreciated by letting the light fall sideways on the body. The



duration of the rash is uncertain, sometimes disappearing rapidly or lingering for a number of weeks. When the lesions disappear no trace of their existence may be left behind, but at other times a tolerably persistent pigmentation may be observed. Usually the macules are not elevated above the level of the skin, but at times the

FIG. 15.



Circular or Ringed Erythematous Syphiloderm (Squire).

eruption assumes a maculo-papular character, and in the further evolution of the disease the lesions may become frankly papular and even pustular. Subjective symptoms, if present at all, are very slight.

Relapses of the erythematous syphiloderm sometimes



occur, taking place during the first year. It is apt to be localized, and the lesions show a tendency to assume the circinate form. This form of syphiloderm is thought by Unna to be due to changes in the local nerves constituting a so-called neuro-syphilide, under which title he also places several other cutaneous changes occurring in syphilis.

The diagnosis is generally easy. The erythematous syphilide, especially when accompanied by fever, may bear some resemblance to measles, but the history of the case, the circumscribed indolent character of the specific rash, in many instances sparing the face, and the absence of catarrhal symptoms will sufficiently mark the distinction. The medicinal rashes are to be recognized through the history of the case, the essential features of the lesion and by the fact of subsidence on discontinuance of the exciting agent. The patches of tinea versicolor are of a fawn color, usually have been in existence for a long time, are limited to the trunk and upper extremities, and are generally made up of some very extensive and very small lesions; finally a few scales put under the microscope will show the parasitic elements. In many cases concomitant symptoms of syphilis—the initial lesion, erythema of the fauces, scabs in the hair, indurated glands—may be discovered.

What is known as the *Pigmentary Syphilide* is a comparatively rare expression of the disease. It appears early or late in the course of the affection, is more frequent in females, and is usually seated upon the lateral surfaces of the neck. At first sight the affected parts look as if they were dirty, but a closer inspection will discover irregularly round or oval spots of a light chocolate color that are not very sharply defined. The spots may continue months or years, and would seem to be uninfluenced by mercurial medication. The nature of the process is still somewhat in dispute.<sup>1</sup>

<sup>1</sup> See article by R. W. Taylor, Jour. Cutan. and Ven. Dis., April, 1885.



**Syphiloderma Papulosum.**<sup>1</sup>

(Syn. *Papular Syphilide*, *Syphilis Cutanea Papulosa*.) The papular syphiloderm in its various forms and modifications is of frequent occurrence and great interest. Papules may coexist with the erythematous rash; they may be developed out of preceding macules, or they may occur independently as the first cutaneous symptom of syphilis. The papular lesions are divided into the small and the large.

The *Small Papular*, or *Miliary Papular Syphiloderm* varies in size from a pin head to a linseed, is rounded or acuminate, of a bright red color in the beginning, but gradually takes on a darker hue. The eruption may be scattered or grouped, sometimes arranged in patches, and is most freely developed on the trunk. Some of the papules are capped by minute vesicles or vesico-pustules. The eruption makes its appearance in two or three months from the development of the chancre, is very chronic, and prone to relapse. When the papules undergo involution they leave behind pigmentation and shallow atrophic pits.

<sup>1</sup>See admirable illustrations in Duhring's Atlas of Skin Diseases.

FIG. 16.



Papular Syphiloderm in Negro (Taylor).



This form of eruption should not be confounded with papular eczema, keratosis pilaris, or lichen planus (q. v.).

The *Large Papular Syphiloderm* (lenticular syphilide) is a common and characteristic type of syphilitic eruption. The lesions vary in size from a split pea to a small coin, are flat or hemispherical, thoroughly defined, smooth, glistening, and in the later stages of a decided ham color. They come out quite freely, and in the beginning may be widely disseminated, appearing on the trunk, face, forehead (*corona veneris*), scrotum, labia, anus, etc. This syphiloderm may appear early or late in the disease and is apt to relapse. The papules, after persisting for a variable period, disappear by absorption, followed by pigmented atrophic spots that gradually turn white.

Important modifications of the papular syphiloderm are the moist papule, and the papulo-squamous form of eruption.

#### Moist Papule.

(Syn. *Mucous Patch, Broad or Flat Condyloma*.) This lesion varies in size from a pin head to a small coin, the large condylomata being formed by the coalescence of those of smaller diameter. A common situation for the moist papule is in regions that are more or less in contact, heat and moisture favoring their development. Thus they are found about the anal and genital regions (in women) under the breasts, between the toes, in the axillæ, etc. They are of a tolerably soft consistence, and the surface is usually bathed in a sticky, mucoid secretion that is highly contagious and often very offensive. The surface is generally flat, and the lesion possesses a well-defined outline; on the other hand, papillary hypertrophy may develop, resulting in elevated, warty growths pouring out a stinking fluid from between the papillæ, which dries into yellowish-brown crusts.

#### Papulo-Squamous Syphiloderm.

(Syn. *Squamous Syphilide, Psoriasis Syphilitica, Syphilis Cutanea Squamosa*.) At times the amount of



scaling is so marked a feature of the papular eruption as to warrant the designation of the scaly syphiloderm, or, as it is sometimes unscientifically termed, syphilitic psoria-

FIG. 17.



Circinate and Scaling Form of Papular Syphiloderm (Kaposi).

sis. The eruption is generally localized, and the scales, which are of a dirty, grayish color, are not so detachable nor profuse as in psoriasis. The lesions may be discrete or form groups, and by fusion develop into patches of considerable size, and in the further march of the disease, that is, by simultaneous evolution and involution, various ringed and gyrate figures may be formed quite as in



psoriasis vulgaris. Papillary hypertrophy may also take place in addition, with the result of producing warty vegetating lesions (*syphilis cutanea vegetans*).

While the squamous syphiloderm may be found upon any portion of the body, the palms and soles are particularly liable to attack.

#### Palmar and Plantar Syphiloderm.

This syphiloderm is very chronic and may be a recent or late manifestation. Syphilitic papules in this region are considerably modified by the thickness of the epidermis and the traumatism to which they are necessarily subjected. The various specific lesions that appear upon the palms do not all go, however, to form the true scaling syphiloderm of this region, although under certain favoring circumstances this transformation generally occurs. In addition to the erythematous eruption and a few flat papules, which remain discrete, I have occasionally met with the peculiar isolated corneous masses in this region. These may be picked out with a knife, but if undisturbed disappear, leaving some scaling behind. According to Taylor the true scaling syphiloderm of these parts usually appears in the shape of a few flat papules of the diameter of a line or more, being at first elevated, sharply outlined, and of a deep red color. Subsequently, if not treated they lose their outline, become flattened and are reinforced by other papules. They gradually increase in size, run together, and form large, irregular patches. There may be one large patch or several small ones. Scaling follows, and even fissures and ulcers. Exceptionally, the disease creeps along with a crescentic margin, somewhat elevated, and of a line or more in width.

This syphiloderm must be distinguished from psoriasis and eczema. Psoriasis limited to the palms is rare, there generally existing lesions of the disease in the usual situations; squamous eczema usually presents more infiltration, is more widely spread, and is attended by more itching.



FIG. 18.



Circumscribed Scaling Papular Syphiloderm of the Palm (Taylor).

### Syphiloderma Vesiculosum.

(Syn. *Vesicular Syphilide*, *Syphilis Cutanea Vesiculosum*, *Syphilitic Eczema*.) It is questionable as to whether the vesicular syphilide should be recognized as an independent manifestation, although several varieties of this lesion have been described by writers. Bassereau, for example, divided the vesicular syphilide into the vari-



celliform, the eczematous, the herpetiform and the vesicular with a papular base. It would appear, however, that the stage of vesiculation is mostly transitory, or at times an accidental feature in the evolution of other forms.

### Pustular Syphiloderm.

(Syn. *Syphilis Cutanea Pustulosa*, *Pustular Syphilide*.) This syphiloderm is not so frequent as the varieties just described. It may be an early or late manifestation, originates from macules or papules, and undergoes various modifications, and according to circumstances is termed acne-form, variola-form, ecthyma-form, etc. In the interest of clinical simplicity it will be treated under the following heads:

The *Small Acuminated Pustular Syphiloderm* is generally seated upon papular bases, about the size of millet seed, that have their origin about the hair follicles. The lesions may be grouped or disseminated, involve the whole surface, or be localized, the latter mode of development occurring especially in relapses. The purulent contents dry into crust, which falling off displays a collaret of epidermis around the base of the lesions. This variety of pustule may appear early or late, and is apt to relapse. It is not unusual to discover other syphilitic lesions at the same time.

The *Large Acuminated Pustular Syphiloderm*, also called the acne-form and variola-form syphiloderm, is formed about a hair follicle or sebaceous gland, and consists of pustules of the size of a split pea, seated upon a dark red base. While occurring upon the body generally, they select by preference the scalp, shoulders and face. The pus dries into rather thick crusts of yellowish-brown color, and are sometimes umbilicated, that is, depressed in the center, and underlying this is some degree of ulceration. It is an early manifestation, and somewhat rare.

This syphiloderm should not be confused with small-pox in the pustular stage, to which the lesional resemblance is very close, with acne, or with iodic or bromic acne. The



history of the case, the concomitant symptoms, etc., will usually suffice for the differentiation.

The *Small Flat Pustular Syphiloderm*, or impetigo-form syphilide, develops in the form of small, flat pustules,

FIG. 19.



The Variolaform Syphiloderm (Taylor).

seated upon reddish bases, the pus drying into thick, yellowish or yellowish-brown crusts. The lesions may be isolated, grouped or else run together into large pustulo-



crustaceous patches. The surface beneath may be superficially or deeply ulcerated; in the latter event the eruption is either a late symptom, or has developed in a broken-down subject.

This syphiloderm is especially encountered on the scalp, genitals, face and limbs. On the scalp it resembles pustular eczema, but in the latter affection, in addition to the pruritus, removal of the crusts will discover no ulceration, and besides there is usually a repulsive odor present in syphilis.

The *Large Flat Pustular Syphiloderm*, or ecthyma-form syphilide, occurs late, and manifests itself in the form of isolated, unsymmetrical, large, flat lesions having a deep red base. Crusting, the character of which will depend upon the nature of the lesion, soon follows the appearance of the eruption, and in every instance will be found covering underlying ulcers. Two varieties are described, the superficial and the deep, the difference consisting among other things in the quality of the infiltration and the character of the subsequent ulceration. The crust in the superficial form is flat, although relatively thick, of uneven shape and of brownish or blackish color. The underlying erosion is not very deep and secretes a yellowish fluid; sometimes the line of ulceration extends as a furrow beyond the crust. This syphiloderm usually attacks the trunk and extremities, and occurs within the first year after infection.

The crusts of the deep form are conical, stratified as in the oyster shell, and are of a black or greenish black color, and quite bulky. Underneath the ulceration is profound, and the floor of the lesion secretes a yellowish puriform fluid upon which the superimposed crusts may be said to swim. This condition is called *Rupia*, and, so far as I know, has no analogue among the non-specific eruptions. It must be stated, however, that this character of crust is not strictly limited to the lesion in question, but is also found in the so-called bullous, and even tubercular syphiloderm. The deep pustular syphiloderm is a late manifestation, and is associated with general cachexia.



The more superficial, flat, pustular syphiloderm bears a close likeness to simple ecthyma, but differs from it in its non-inflammatory appearance, having a darker copper-colored areola, in the greater depth of the ulceration, and in the thicker, more adherent crusts.

**Syphiloderma Tuberculosum.**

(Syn. *Tubercular Syphilide*, *Syphilis Cutanea Tuberculosa*.) The tubercular syphiloderm is a late manifestation, sometimes occurring years after infection, and often

FIG. 20.



Tubercular Syphiloderm of Face, in Parts Covered with Crusts (Ricord).

in such cases, especially in women, it is impossible to get a history of any intervening lesions. It is one of the most frequent of the syphilodermata. As ordinarily encountered, the tubercles appear in limited numbers, occur in groups and occupy certain localized regions. The lesions are of brownish-red color, possess a glistening surface, are of semiglobular shape, circular outline and of firm consistence. In size they vary from a pea to a bean or even a hazlenut, and correspond in many respects to the large papules already described. By some writers this lesion is



called a cutaneous gumma, being seated deep in the corium and sometimes dipping into the subcutaneous tissue.

The tubercular syphiloderm is particularly apt to attack the face, the back and the neighborhood of the joints.

FIG. 21.



Annular Tubercular Syphiloderm (Taylor).

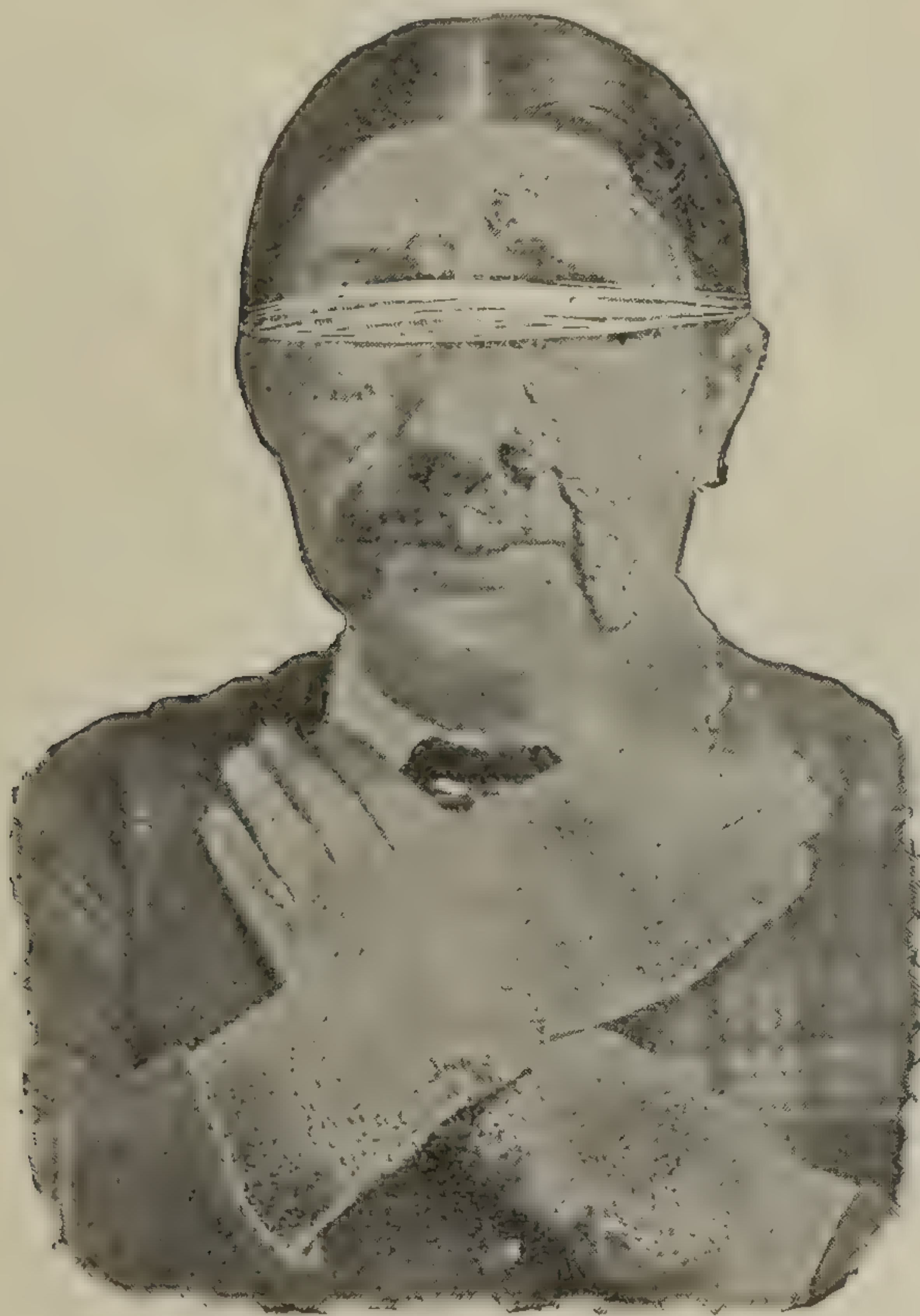
When an early precocious manifestation the whole body may be involved, but the more remote the infection the more apt is the eruption to consist of a few or a single group of tubercles. These groups may present different configurations; for example, according to the stage of evolution, there may be present clusters of tubercles with



crescentic edges, an annular ring may be formed by the method of development of the lesions, or as a result of central absorption, or by coalescence of several groups, the eruption will assume a serpiginous character.

The tubercular syphiloderm runs a chronic course, and, untreated, may persist for an indefinite period. It may

FIG. 22.



Papillomatous Syphiloderm.

terminate either by resolution or ulceration. In the former event the skin is left depressed, pigmented and sometimes somewhat scaly, but atrophic changes may often be prevented by timely treatment. When ulceration occurs it is rarely general, but here and there a tubercle breaks down and exhibits a small rounded, punched-out ulcer, usually situated in the periphery of the patch, and covered by



crusts. By the breaking down of all the tubercles in a patch the individual ulcers may unite to form one large ulceration. This syphiloderm may also undergo the papillomatous transformation, producing the so-called *frambæsia*, or *syphilis cutanea papillomatosa*.<sup>1</sup>

The tubercular syphiloderm is to be distinguished from lupus vulgaris, leprosy and epithelioma. (See those diseases.)

### **Syphiloderma Gummatosum.**

(Syn. *Gummatous Syphilide*, *Syphilis Cutanea Gummatosa*.) Gummata occur late in syphilis and are most commonly situated upon the scalp, forehead, buttocks, about the joints and where the connective tissue is loose and abundant. Only one or two tumors are usually to be noted.

The growth makes its appearance in the tissues as a small pea-sized, firm, circumscribed nodule, which gradually increases in size, attaining the diameter of a walnut or forming even larger deposits. The overlying skin, at first normal in color, finally becomes encroached upon and assumes a reddish hue, and the gumma will feel soft and doughy to the touch. Gummata may disappear by absorption, or else ulceration occurs and leaves in its wake a deep clean-cut ulcer that secretes a bloody, fetid pus. Healing is often slow and may be further delayed by various accidents, such as gangrene, phagedæna, etc. Ulceration may also extend deeply and involve the bones, skull, tibia, in a necrotic process, and in the end produce great deformity. This syphiloderm should be differentiated from fatty and fibrous tumors, from erythema nodosum, abscesses and furuncles.

### **Syphiloderma Bullosum.**

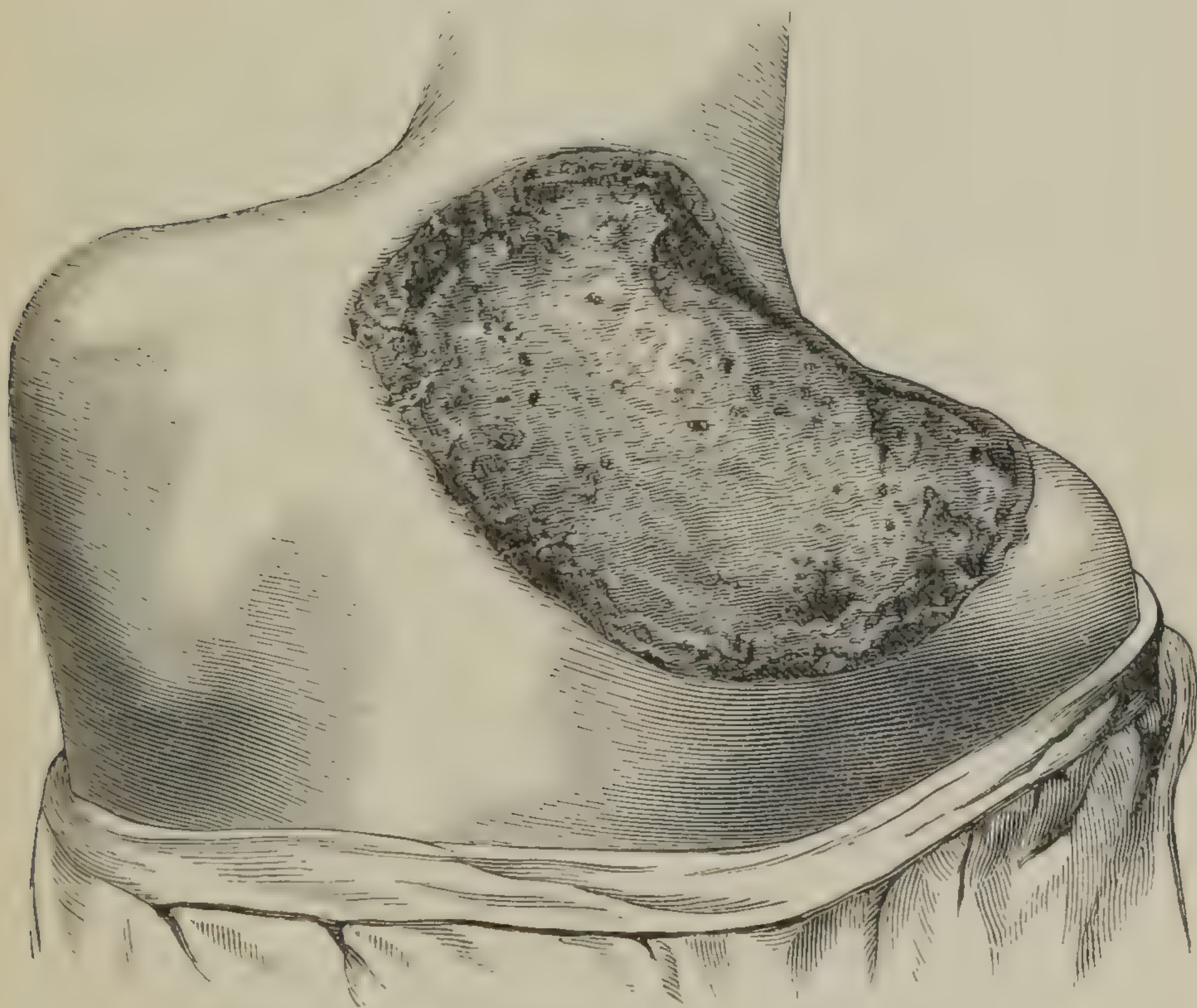
(Syn. *Bullous Syphilide*, *Syphilis Cutanea Bullosa*, *Syphilitic Pemphigus*.) The bullous syphilide, if it be

<sup>1</sup> I have had recently under my care an almost unique case of this sort, in which various parts of the body, especially the face and limbs, were occupied with an enormous papillary growth arranged in bands several lines in height and half an inch in width. Between the enlarged papillæ welled up a most horrible stinking pus. See Fig. 22.



properly distinguished from certain forms of pustular lesions, may be regarded as a rare symptom, and it is said to occur for the most part in cachectic subjects, and, as is well known, it is not uncommon in hereditarily affected children. The bullæ vary much in size, have clear contents in the beginning that gradually become purulent, and the effused pus dries into thick, greenish-black, ad-

FIG. 23.



Serpiginous Syphiloderm of Neck and Back (Taylor).

herent crusts, sometimes taking on the rupial arrangement, in which case the underlying ulceration is profound.

The foregoing brief sketch gives the essential points of what may be called the more elementary forms of cutaneous syphilis, but it must not be forgotten that in this protean malady a great variety of clinical phases may be evolved out of, or be built upon, these ; thus, the serpigi-



nous syphiloderm, both superficial and deep, and the various types of the malignant precocious eruptions are but so many examples of these manifold transformations and developments.

Fortunately, however, for diagnosis and a proper conception of the unity of these various apparently diverse processes, the kinship of one to the other is generally readily determined, owing to certain features that they all possess in common.

**TREATMENT.** The treatment of the syphilodermata is mainly constitutional, being directed to the systemic condition upon which the cutaneous expression of the disease depends, but at the same time well directed local measures are often of great value in expediting a cure. Mercury and the iodides are specific remedies in syphilis and, employed in a judicious manner, are absolutely indispensable; but here, as elsewhere, the general state of the patient, as well as the name of his disease, must be taken fully into consideration to obtain the most satisfactory results.

There are a number of different methods of introducing mercury into the system, namely, by the mouth, by inunction, by fumigation and by hypodermic injection; and each undoubtedly has its place in selected cases. The most convenient and practicable avenue is by the mouth, and, although at times attended by certain drawbacks, ordinary care and skill will readily obviate these inconveniences. Among the preparations of mercury commonly employed may be mentioned the protiodide, the gray powder, blue mass, corrosive sublimate, the tannate, etc. In this country the protiodide is the favorite salt with most physicians. It may be given in pill form combined or not with hyoscyamus, conium or opium or as a tablet triturate. Usually from one-sixth to one-half grain three times a day will suffice, but if a more decided impression is demanded this quantity may be slightly increased, but, generally, under such circumstances, some other preparation or mode of administering the drug may be selected with advantage. The golden rule, in my opinion, is to give only such



quantity as will do the work in hand, with the least detriment to the welfare and comfort of the patient. A most excellent formula suggested by my friend, Dr. R. W. Taylor, is as follows :

R.	Hydrargyri protiodidi,	gr. vj–vij.
	Ferri et quiniæ citratis,	ʒjss.
	Ext. hyoscyami,	gr. vj.
	M. et div. in pil. No. xxx.	
S.	One pill three times a day.	

It is a habit with some to change the preparation of mercury from time to time, either from a belief that certain combinations are useful for certain periods in the disease, or that in this way better results may be obtained. I am personally in the habit of giving the green iodide throughout, and if a change seems to be required I make it in the direction of inunction or some like procedure.

The inunction method is a very valuable way of using mercury, especially when the extent or gravity of the lesions require prompt measures ; otherwise it is too dirty and irksome for employment in private practice, and indeed it loses half its efficacy unless applied by such expert rubbers as may be found at special establishments. The old blue ointment is perhaps the best agent, about a drachm being used for an inunction and successive portions of the body being taken for each application, in this way avoiding undue local irritation.

Fumigations with calomel or the black oxide of mercury is a cleanly and effective plan of treatment in many cases.<sup>1</sup> The hypodermic injection of mercury has been very vigorously revived of late years, and one preparation after another is being brought forward for this purpose with great persistency and enthusiasm. The merits of this question cannot be discussed here, but it is safe to say that for the practising physician it will never be a popular plan of procedure. However, when for any reason it may be

<sup>1</sup> For the details of these operations the reader is referred to the exhaustive treatise of Taylor, Lea Bros. & Co.



deemed necessary to introduce mercury in this manner corrosive sublimate will be found to meet all the requirements of the case with the least danger to the patient.

R.	Hydrargyri bichloridi,	gr. xxxij.
	Ammonii chloridi,	gr. xvj.
	Aquæ destillatæ,	℥ij. M.
S.	Ten minims to be used for one injection.	

All antiseptic precautions should be taken in making the injections. The gluteal region is the best point of introduction.<sup>1</sup>

The so-called "mixed treatment" consists in the simultaneous administration of mercury and iodide of potassium, and is held to be of especial value in tardy manifestations of the disease. A formula that I have employed for many years is as follows:

R.	Hydrargyri protiodidi,	gr. v-x.
	Ext. opii,	gr. v.
	M. et div. in pil. No. xx.	
S.	One pill morning and evening.	

R.	Potassii iodidi,	℥ss.
	Ferri et ammonii citratis,	℥j.
	Tr. nucis vomicæ,	℥ij.
	Aquæ,	℥jss.
	Tr. cinchonæ comp.,	q. s. ad ℥iv. M.
S.	Teaspoonful in one-half glass water after meals.	

It is often a good plan to give the patient in addition a saturated solution of iodide of potassium (R. Potassii iodidi, ℥j; aquæ destillatæ, q. s. ad f℥j. M.) so that larger doses of the salt may be administered from time to time as may be indicated.

The two drugs may be combined in the same prescription.

<sup>1</sup> The most masterly presentation of this question will be found in a lecture by Professor Fournier, published in the Medical Week, July 23, 1897, entitled "On the Choice of a Mercurial Treatment."



R.	Hydrargyri biniodidi,	gr. ss-j.
	Potassii iodidi,	ʒij.
	Ammonii iodidi,	ʒss.
	Syr. aurantii corticis,	ʒij.
	Tr. aurantii corticis,	ʒj.
	Aquæ destillatæ,	q. s. ad ʒiv. M.
S.	Teaspoonful well diluted in water after meals. <i>Keyes.</i>	

R.	Hydrargyri bichloridi,	gr. ij-iv.
	Potassii iodidi,	ʒviij.
	Syrupi sarsaparillæ comp.,	ʒviij. M.
S.	Teaspoonful in water after meals.	

The bichloride of mercury, combined with the iodide of potassium, and prescribed in conjunction with a bitter tincture, or, in anæmic subjects, with the tincture of the chloride of iron, is a favorite prescription with many syphilographers.

The iodine compounds are used by some authorities even in the early stages of syphilis, and G. H. Fox and others regard it highly in the neuralgias and arthritic pains of the early stage, and in this estimation of its utility I fully concur, but after abating these symptoms it should be withdrawn, as its longer administration has no further effect upon the course of the disease. In late tertiary lesions its effects are marvelous, but it would seem to be without influence in the prevention of relapses, and in all cases mercury should be employed at the same time, and kept up for a season after the suspension of the iodide. The usual dose is from five to twenty grains, but this quantity may be greatly exceeded, especially in implications of important organs.

The question as to the length of time constitutional treatment should be kept up is of much practical importance. So far as the administration of mercury is concerned, I must confess to little confidence in the long-continued, uninterrupted courses, running over months or years.

In my judgment some form of the so-called intermittent treatment is to be preferred. In the first place the drug



should be continued until the symptoms have yielded and, after this the mercury may be given intermittently for at least two years longer. At the same time appropriate tonic medication, given, for example, during the periods of rest, should be made a conspicuous feature of the treatment. Of course, it will be understood that the dose of mercury, the length of time occupied in active medication, or in abstention from treatment, will largely depend upon the case in hand.

Judicious local treatment will often hasten the disappearance of disfiguring or annoying cutaneous lesions. Certain of the earlier and more superficial manifestations require nothing, but papular lesions on the face are much helped by ointments of the white precipitate, consisting of thirty to sixty grains of the medicament to the ounce of lard or cold cream. Oleate of mercury in from five to twenty per cent. strength is also useful. Squamous patches on the palms and soles are much helped by the compound salicylated soap plaster. Moist papules are best treated by absolute cleanliness, and opposing skin surfaces should be kept apart by interposition of absorbent cotton. The lesions may be dusted with dry calomel, or, if obstinate, occasionally touched with the nitrate of silver stick, or the acid nitrate of mercury.

In ulcerated lesions generally the crusts are to be removed, and the ulcers dressed with aristol or some other similar powder. Syphilitic tubercles usually disappear promptly under internal treatment, but it is sometimes advisable to apply local remedies simultaneously. The salicylated soap plaster, spread on cloth, is excellent for this purpose, as is also the emplastrum hydrargyri of the German pharmacopœia. Mercurial vapor baths, and baths of corrosive sublimate are also excellent means for the removal of local lesions.

PROGNOSIS. The prognosis of the syphilodermata necessarily involves the future of the disease as a whole. The various phases of this question cannot be discussed here; but it may be said that the disease is not the hope-



lessly incurable malady that it is popularly supposed to be—on the contrary, under modern methods of treatment, hygienic and specific, the outlook is far from gloomy, and while from many causes a considerable number of syphilitics go from bad to worse, a still larger proportion apparently recover.

### SYPHILIS OF THE SKIN, CONGENITAL.

The lesions of the skin due to inherited syphilis present peculiarities sufficiently marked to warrant separate consideration. On this organ the first observable symptoms of the disease are apt to fall.

Although syphilitic children may present specific eruptions at birth, or, indeed, during intra-uterine life, it is a matter of common experience that they often appear comparatively healthy when first born. This condition of apparent well-being rarely continues beyond the first six weeks, and even before any disturbances of the skin are observed, the child will often present marked evidences of syphilitic cachexia.

Among the more prominent general symptoms are to be noted the characteristic snuffling, the sallow skin and the striking senile appearance of infants thus affected. The principal eruptions seen in connection with hereditary syphilis are the following:<sup>1</sup>

The *Erythematous Syphiloderm*, or syphilide, is the commonest and usually the earliest hereditary eruption, sometimes being present at birth, but rarely developing after the third month. The rash generally first appears upon the belly and lower part of the chest, and spreads from those situations to other portions of the body, limbs and face. The lesions, which are about the size of the finger nail and of an ovalish contour, are of a tolerably bright red in the beginning, and may be effaced by pressure, but later on they assume a coppery color. The maculæ often coalesce to form extensive non-elevated

<sup>1</sup> It must be remembered that, as in acquired syphilis, certain of these eruptions may coexist, or be evolved one from the other, etc.



patches. When the erythema occurs in large sheets a common situation for its development is about the neck and buttocks. In these latter localities it simulates ordinary intertrigo very closely, except that about the anal and genital regions it travels beyond the parts covered by the diaper, and runs down the backs of the legs to the heels. A few outlying macules or maculo-papules may generally be discovered. It is not uncommon to find the palms and soles red, wrinkled and desquamating. The bistre tint so often seen in the face is due to the pigmentation left by a preceding roseola. The erythematous patches in certain situations may, as the result of traumatism, become fissured, covered with crusts or become converted into mucous patches. The diagnosis is not difficult if the general symptoms and the special features mentioned above are carefully considered.

The *Papular Syphiloderm* is an early symptom of the disease. It may exist alone or be present in connection with the erythematous eruption. The discrete, flat papule is the most frequent type, the small acuminate papule, according to Taylor, being unusual, except as a relapsing lesion, or else late in the disease. The papules have the peculiar syphilitic tint and may be smooth, or in certain situations, *e. g.*, palms and soles, desquamation is a marked feature. About the anus and genitals and at the corners of the mouth, as well as in other regions subject to pressure or irritating influences, the papular lesion becomes transformed into the *mucous patch*, which does not differ materially from that observed in the acquired disease. Excoriations, fissures and consequent loss of substance are not infrequent, and produce characteristic scars, especially about the nose and angles of the mouth.

The *Vesicular Syphiloderm* as an independent type is exceedingly rare, and is usually associated with other forms of eruption, or it may develop upon the papular lesion.

The *Pustular Syphiloderm* may occur as the only manifestation, or appear in connection with other eruptions; or it may develop from papular or vesicular lesions.



Occurring early it has usually a grave significance. The head, face, palms, soles, trunk and limbs may be affected, but it generally is more abundant on the face, thighs and buttocks. On the face, and particularly about the mouth, the pustules run together to form crusted patches, under which there is a certain degree of ulceration. Discrete pustules form also upon the palms and soles, and in cachectic children they form around and under the free border of the nails.

Some authors describe a *Furuncular Syphiloderm*, which may constitute the sole visible evidence of the disease. Atkinson looks upon this process as related to the tubercular and gummatous infiltration.

The *Bullous Syphiloderm*, or the so-called syphilitic pemphigus, is an early and very grave expression of the hereditary affection. It is frequent. It is not common upon the face and trunk, but seeks by predilection the palms and soles, whence it may travel up the forearms or legs.

The bullæ develop on dusky reddish areas as small vesicular, or sometimes pustular, elevations of the epidermis, and rapidly go on to form pea- or walnut-sized blebs having cloudy, purulent or even bloody contents. They have no uniformity of shape and may be either tense or flaccid. According to Taylor they are surrounded by a thickened rim of copper-colored integument. Symmetry is the rule. The non-specific pemphigus differs from the bullous syphiloderm in the fact that it does not occur on the palms and soles, in the serous character of the contents of the blebs, and in the absence of profound cachexia and other evidences of syphilis; besides the syphilitic eruption does not relapse, and is rarely seen after the twelfth week (Atkinson).

The *Tubercular Syphiloderm* is rare in hereditary syphilis and generally occurs late. Fournier states that they are mostly to be seen on the face and the anterior surfaces of the legs. *Gummata* are usually manifestations of late hereditary disorder.



**TREATMENT.** The treatment by inunction as suggested by Sir Benjamin Brodie undoubtedly gives the best results in the majority of cases. Brodie was in the habit of employing mercurial ointment of the strength of a drachm to the ounce of lard, which was spread over a flannel roller, and bound around the child once a day. Usually a piece of the size of a hazel nut of equal parts of unguentum hydrargyri and vaseline may be smeared over the flannel binder every day, taking care, however, to wash the parts daily with soap and warm water, and if irritation of the skin should set up, to apply the ointment to a different region. This treatment should be continued for some time after all symptoms have passed away. Sometimes the condition of the skin or other reasons render the inunction cure inadmissible, in which case the drug may be administered by the mouth. For this purpose powders of mercury and chalk may be prescribed in doses of from one-sixth to one-quarter of a grain, three times a day. This quantity may be increased or diminished according to circumstances. Keyes highly recommends a mixture of one-half grain of the bichloride of mercury dissolved in six ounces of water, of which a teaspoonful may be given hourly for the first day, then every two hours, and finally every three hours, or at longer intervals, unless it obviously disagrees. Monti gives calomel in the following combination :

R.	Hydrargyri chlor. mitis,	gr. jss.
	Ferri lactatis,	gr. v.
	Sacchari albi,	q. s.
	Ft. chart., No. x.	M.
S.	One to four a day.	

Kaposi recommends the tannate of mercury.

Iodide of potassium alone, or in combination with mercury, is indicated in late gummatous and osseous lesions. When thought necessary it may be given well diluted in from one- to five-grain doses a day, or combined with mercury.



R. Hydrargyri bichloridi, gr. i-ij.  
 Potassii iodidi, ʒss.  
 Syr. aurantii corticis,  
 Aquæ, āā ʒij. M.

S. Five to ten drops in plenty of water three times a day.

Ulcerations should be treated with antiseptics and dusting powders. Affections of the mucous membranes like "snuffles" should be treated by a two per cent. boric acid douche, and localized lesions touched with nitrate of silver in suitable strength.

### MYCOSIS FUNGOIDES.

This affection, first described by Alibert in 1814, is among the rare disorders of the skin. In this country the disease has been studied by Duhring, Piffard, Wigglesworth, Tilden and Blanc.

In its early stage the disorder is characterized by certain ephemeral, or more permanent, cutaneous disturbances, that have eczematous, erythematous, urticarial, lichenoid or psoriasiform features; and afterwards bright red or pinkish, irregularly shaped and distributed patches appear. These may be small and isolated, or large and confluent. These patches in time become somewhat elevated above the surface, and are the seat of marked itching and burning.

This superficial stage of the disease may endure for months or years, but finally the infiltration increases, and leads to the formation of reddened, thickened plaques. These lesions come and go more or less rapidly. The tumors that constitute the characteristic feature of the affection may be developed from these infiltrations, or they may appear on hitherto uninvolved regions of the skin. The tumors are of a bright or dark red, sometimes bluish-red color, and were compared by Alibert to tomatoes. They are sharply defined, ovalish or hemispherical, and vary in size from a pea to an orange. Their epidermal covering is smooth and shiny, or the surface may be excoriated and give off a thin, serous, bloody discharge, with



the formation of a crust. Suppuration is rare. At this time subjective sensations are slight. The tumors sometimes grow rapidly, sometimes very slowly, but having attained a certain dimension spontaneous involution is the rule, leaving no trace behind. The disease, however, is kept up by the continual reappearance of new lesions. Painless enlargement of lymphatic glands is present in most cases. The general health may remain fairly good for years, but finally the patient succumbs to increasing cachexia, only one case so far reported (Bazin) having recovered. The average duration of the disease is from five to eight years.

In another type of the disease the characteristic tumors may be the first evidence of the malady. They do not disappear as in the form just described, and death ensues in from a few months to one or two years.

The disease does not appear to be contagious. Most of the cases have been in males over thirty years old. Although a variety of micro-organisms have been observed in the affected tissues, none has yet been shown to have a causative relation to the disease.

The tumors are made up of small round cells lying in the interspaces of a delicate reticulum. The growth was formerly regarded as a sarcoma, but is thought to be a granuloma. Bowen says that there are cases where it may be difficult to say whether we have to do with mycosis fungoides or sarcomatosis, and that a relationship with the sarcomata must still be regarded as a possibility.

**DIAGNOSIS.** In its erythematous stage mycosis fungoides may greatly resemble eczema, but the patches are more defined, more infiltrated and less weeping than in the latter disease. After the tumors have formed the disease may resemble generalized sarcoma or leprosy.

**TREATMENT.** Up to the present time no treatment has proved of much avail, although Köbner reports a case apparently cured by hypodermic injections of arsenic.

Locally, a great variety of agents have been employed, such as pyrogallol, ichthyol, etc. The writer secured



excellent results in a recent case by application to the tumors of unguentum vaselini plumbicum with aristol, a drachm to the ounce. The itching may be greatly diminished by painting on a paste of oxide of zinc, half an ounce, with two ounces each of mucilage of acacia and glycerine, and two per cent. of carbolic acid. In the case referred to the administration of thyroid extract seemed to be doing good, but the patient subsequently ceased attendance at the clinic.

PROGNOSIS. The prognosis is bad. The cases in which the formation of tumors is the first evidence of disease run a more rapid course than the cases in which there is an erythematous stage.

### SARCOMA CUTIS.

Owing to the many clinical varieties that are encountered, it is a matter of some difficulty to present a satisfactory description of the affection.

In most instances sarcoma of the skin is secondary to a similar growth in some other organ. Not infrequently, however, the disease occurs primarily in the skin. Clinically, sarcomata of the skin may be divided into the pigmented and the non-pigmented forms.

#### Melanotic Sarcoma.

This is the most frequent type of the disease, and frequently originates in a pigmented mole. From the mole a spongy, fungating, black tumor develops. In the course of a few weeks or months, generally first adjacent to the original lesion, numbers of small, firm, pigmented masses appear. These small tumors run into larger masses, ulceration occurs, the lymphatics become affected, and, after involving the skin more or less generally, metastasis to internal organs occurs. This form of sarcoma is generally rapidly fatal. Hutchinson has described a special type of melanotic sarcoma under the title of melanotic whitlow that begins as a chronic onychitis with a slight pigmentation; gradually a dark, fungating tumor develops,



and the sarcoma subsequently becomes generalized. Histologically these tumors are very vascular, round or spindle-cell sarcomata, with giant cells in some parts of the growth. There is also always more or less pigment to be seen in and between the cells. Unna thinks that all malignant new growths originating from pigmented moles are probably carcinomatous.

FIG. 24.



Fibro-sarcoma of hands.



**Non-pigmented Sarcoma.**

Non-pigmented sarcoma may exist as a single growth, or large numbers of tumors may be present. In some cases the first tumor springs from a mole or scar which has been irritated. About this other tumors develop till a whole part or extremity is thickly studded with them. The individual growths vary in size from a pea to a pigeon's egg or larger, are smoothly round or lobulated, and usually firm to the touch. The skin over the lesion is, at least in the earlier stages, normal in color, but as the malady progresses it assumes a livid or reddish hue. In the course of time the skin lying between the growths becomes swollen, red and infiltrated. A limb may thus come to resemble a member affected with elephantiasis. In a few months the nodules coalesce, break down and ulcerate. The clinical history and appearance of this form of the disease will vary much according to the number of tumors and their anatomical constitution.

The course is usually toward a rapidly fatal issue.

**Idiopathic Multiple Pigmented Sarcoma.**

This form of the disease first described by Kaposi<sup>1</sup> is very infrequent. It generally occurs in males and in middle life and manifests itself in the beginning in the shape of reddish-brown or plum-colored pea-sized tumors, which are tender on pressure and the seat of considerable spontaneous pain in some cases. The growths first appear on the flexor or extensor surfaces of the hands or feet. The tumors increase in number and coalesce to form thickened plaques. The hands and feet may become much enlarged by the infiltration and œdema and take on an appearance of elephantiasis. Similar tumors appear on the legs, arms and thighs before the trunk or face is invaded. In a case of my own telangiectases ramified over the infiltrated plaques on the face. The tumors rarely ulcerate, but they often undergo involution, leaving pig-

<sup>1</sup>This affection is now called by Kaposi "*sarcoma idiopathicum multiplex hæmorrhagicum*."



mented scars. When in the course of two or three years the lesions appear on the trunk and face the fatal termination is near. The tumors may form upon the mucous

FIG. 25.



Idiopathic Pigmented Multiple Sarcoma.

membranes. Sooner or later dysenteric symptoms, fever, marasmus, etc., set in and the patient succumbs. Post mortem, the internal organs are found to be involved in the same process. Histologically this form of tumor looks



like a small-cell sarcoma into which many hemorrhages have occurred. The pigmentation is due to the hemorrhage. All cases, it must be noted, do not end in death. I have reported an example of this disease in which the growths underwent spontaneous involution and the patient remained well after sixteen years.<sup>1</sup> Brayton records a case in which the disease had existed for twenty-five years, some of the lesions disappearing from time to time while new ones developed.<sup>2</sup> In arriving at a diagnosis it is important to differentiate the large papular and the gummatous syphilide, mycosis fungoides, leprosy and, perhaps, lupus.

#### Localized Non-Pigmented Sarcomata

of the skin may follow a blow or develop from a nævus or other lesion of the skin. The growth rarely reaches a size larger than an orange. The skin over the tumor may be normal in color or of a darker hue. After a variable time ulceration occurs, and secondary tumors form in the skin, viscera or lymphatics. It should be mentioned that both in *leukemia* and *pseudo-leukemia* tumors and plaques of infiltration, probably sarcomatous in their histology, may develop in the skin and other organs.<sup>3</sup>

Sarcomata are all built up more or less on the plan of embryonal tissue. The growth consists of cells and a connective tissue stroma mingled in varying proportions. No tumor presents so many variations in its anatomical arrangement as sarcoma, and for this reason the microscopical diagnosis may be very difficult. The cells which make up the mass of the tumor may be round, spindle-shaped or branching, with one or sometimes several nuclei, with or without pigment granules. The connective-tissue stroma may be so delicate as to escape notice,

<sup>1</sup> Jour. Cutan. Dis., p. 1, 1883, and p. 21, 1890. This man is still living and in good health.

<sup>2</sup> Indiana Med. Jour., Nov., 1893.

<sup>3</sup> For a full account of these cases the reader may consult Fordyce in Morrow's System of Dermatology, p. 675; and Unna's Histopathology of the Skin.



or so dense as to suggest that the growth is a fibroma. In the idiopathic multiple pigmented sarcoma the pigment is due to hemorrhages into the skin, and Perrin has contended that this form of the disease should be classed among the non-pigmented sarcomata.

**TREATMENT.** The treatment of melanotic sarcoma after dissemination is futile. There may be some chance of cure if the primary growth is removed at an early date. Fordyce advises in non-pigmented sarcoma the administration by the stomach or hypodermically of gradually increasing doses of Fowler's solution.

Köbner has reported a cure of idiopathic multiple pigmented sarcoma by arsenical injections. The treatment by the toxins of erysipelas has been abandoned by most surgeons. In a report made to the New York Surgical Society it was declared that the danger of the treatment was very great, and that the method should never be resorted to except in absolutely inoperable cases.

### LEPRA.

Leprosy, or leprosy, is a chronic, endemic, specific disease characterized by various alterations in the tissues and organs of the body, and usually ending in death. Although all forms of the disease are due to one and the same cause, it is convenient on clinical grounds to divide leprosy into: (1) the tubercular or nodular, (2) the anæsthetic or nervous and (3) the mixed. Nodular leprosy is most common in Europe, nerve leprosy in the tropics, while the mixed form is less frequent generally than either of the others.

No initial lesion has been detected in leprosy, and the method of introduction of the disease into the body is unknown. The incubation period varies considerably, and usually extends over some years, perhaps two, three, or even as many as ten or more, but from the very nature of the case this is a matter difficult of exact determination. There is also a prodromal stage and a period of eruption, but as these differ somewhat in the two principal varieties they will be considered under their respective headings.



**Tuberculated Leprosy.**

After a variable period of general malaise, dyspepsia, constipation or diarrhœa, vertigo, profuse perspiration or local anidrosis, general infection of the system is declared by a chill and a rise of temperature to  $103^{\circ}$  or  $104^{\circ}$  F. These symptoms may last days, weeks or months before the leprous exanthem makes its appearance. The eruption is usually situated on the face, ears, trunk and extremities, and consists of erythematous, infiltrated, hyperæsthetic, sharply-limited macules of a reddish-brown color, and varying in size from a bean or less to several inches in diameter.

FIG. 26.



Tuberculated Leprosy (Danielssen and Boeck).

The first crop of eruptions may fade away, to be followed, with renewed febrile exacerbation, by others, or they may change to a permanent brownish-red stain; and these various processes may continue for months without



further alterations. The spots are often hyperæsthetic at first, and later may become anæsthetic; and this latter condition may be detected in apparently normal regions of integument.

Finally, however, tubercles in the shape of pale red, very small elevations, which enlarge to the size of a pea or filbert, of a brownish color, make their appearance. These may occur anywhere, but the face, penis, scrotum, breasts and limbs are the most usual sites of development. The individual lesions may attain great size, or by coalescence may form larger, irregular, nodulated masses. On the other hand, the original erythematous patches may become profoundly infiltrated, brownish elevations.

The leprous deposit also occurs on any of the mucous membranes, and produces quite characteristic symptoms when the cavity of the nose and the larynx are involved. In most cases, owing to the excessive deposit of leprous nodules and thickenings on the face, the countenance assumes the well marked leonine expression, giving an aspect of brutality to the unfortunate sufferer that is repulsive in the extreme. As a result of various circumstances the course of the tubercles may present very different terminations. Sometimes the lesions undergo involution, leaving brown maculations in their wake or atrophic scars, or, what is very usual, ulceration may take place, the ulcers being superficial, indolent, and healing only after a long time, often only to break down again. The lymphatic glands become enormously enlarged. From time to time acute exacerbations occur, and new tubercles appear after each attack, but usually with diminishing frequency as the disorder advances, to cease altogether after five or six years (Hillis). After months or years, with progressive emaciation, the patient will succumb, either directly from extensive ulcerations, from interference with the respiratory function, or he is carried off by some intercurrent affection or from disorders of internal organs due to invasion of the *lepra bacillus*. The features of the anæsthetic or nervous form of the disease may at any time be super-



added, thus producing what is called the "mixed variety." Nodular leprosy lasts, on an average, about nine years.

#### Anæsthetic Leprosy.

Febrile symptoms are absent in nerve leprosy as a rule, but the patient complains much of uncomfortable feelings

FIG. 27.



Macular Leprosy.



of chilliness, and suffers more or less from ill-defined gastric and other disturbances. Lancinating pains are felt in various parts, together with sensations of numbness or burning. Muscular weakness is an early symptom. Numerous small blebs make their appearance on the extremities, which later in the disease assume considerable proportions. After a time erythematous spots and patches come out on the trunk, limbs and face. They have a certain resemblance to the lesions of erythema multiforme, but are larger and more irregular. The macules are one or two inches in diameter, and later by coalescence may cover large areas, the first spots disappearing and reappearing, and new lesions developing from time to time. It is said that the patches are rarely insensitive at this time, but that the secretion of sweat is absent. Anæsthesia is often apparent in places where no noted changes have occurred in the skin, especially regions supplied with cutaneous nerves from the ulnar and peroneal. In the spreading stage of the malady the spots enlarge peripherally, the borders are raised, studded with papules or vesicles, and the centers become hairless, wrinkled, dry, atrophic and covered with white furfuraceous scales. In addition to the well marked anæsthesia that is now present, large bullæ form, mostly on the extremities. Owing to the presence of leprous deposits in the nerves, these latter, especially the ulnar, become enlarged, and can be plainly felt under the skin. Muscular atrophy is a prominent symptom, the wasting being first visible in the thenar and hypothenar eminences, and involving the muscles of the hand, forearm and even the upper arm.

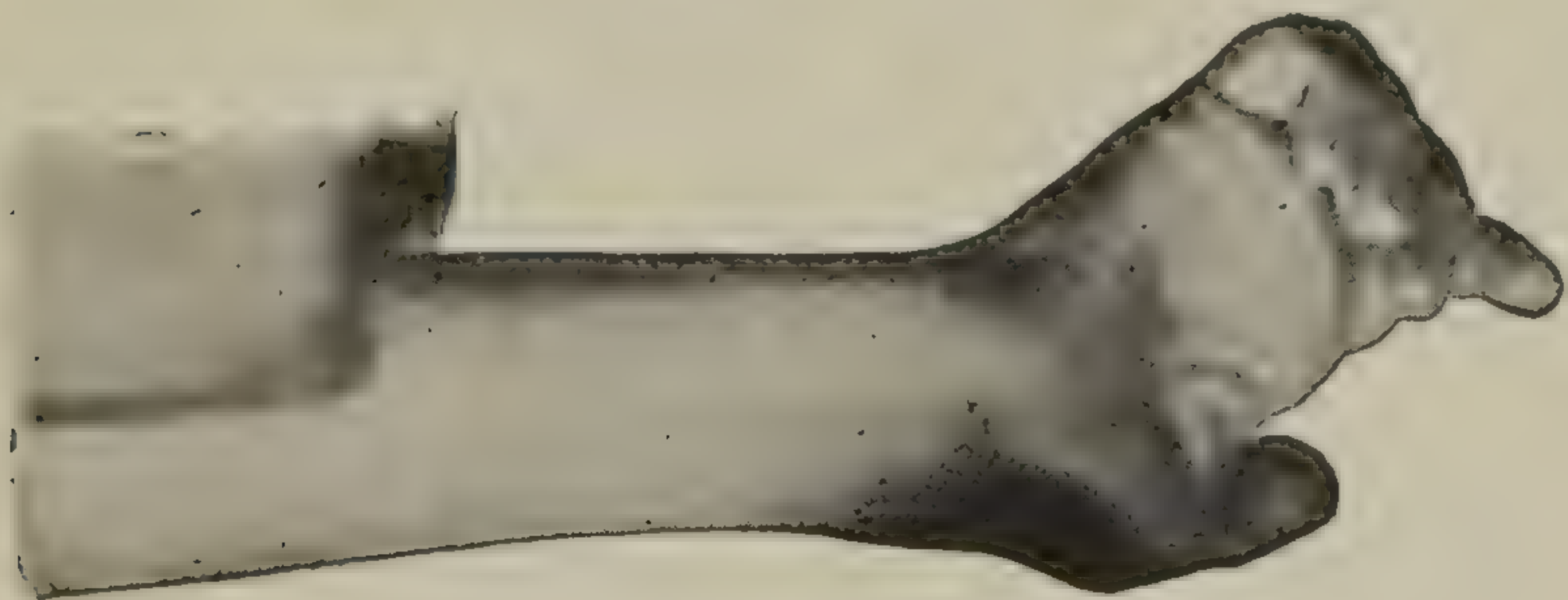
Motor paralyses, especially of the facial nerve, may be combined with the sensory, and after a while the mimic muscles of the face are implicated. Finally, after the various local processes have been long established—*e. g.*, anæsthesia, analgesia and atrophy—the osseous system becomes involved, and there arises the combination of symptoms called *lepra mutilans*. According to Bidentkap, the affection of the bones may develop in two different ways.



Sometimes the deep ulcers left by the bullæ extend and cause profound destruction of the connective tissue, muscles and fasciæ, and in certain situations, such as the ankles, wrists and feet, bones are laid bare and caries appears. As the wounds are not painful, they are often neglected, and large parts of the bone may be destroyed, the articular cavities are opened, and spontaneous amputations occur. In other instances, after the anæsthesia has become pronounced, swellings will appear around the phalanges and the metacarpal and metatarsal bones, which will finally turn livid, fluctuate and burst, and the denuded bones may be seen or felt, and finally be cast off.

Gradually, as the case advances, the symptoms of general marasmus supervene, and the patient dies from exhaustion or else is carried off by some intercurrent disease. In a few instances the disease may be arrested after

FIG. 28.



Hand in Nerve Leprosy.

having progressed to a certain extent, or even after marked changes have taken place. Also, as in the tuberculated form, after a time the lepra of the nerves may become complicated with the tuberoso variety. The duration of the anæsthetic or nervous form of leprosy may be from eighteen to nineteen years.

#### Mixed Leprosy.

As already stated, in a minority of cases the features of tuberculated and anæsthetic leprosy may be conjoined.



This state may begin with one form or the other of the two chief types of the disease, or it may present both forms from the beginning, in which case its progress is more rapid.

**ETIOLOGY.** Leprosy is found in all parts of the globe, in all latitudes, and under the most diversified conditions of soil, food and habits of life. At the same time, it is worthy of comment that nerve-leprosy is more prevalent in tropical countries, while the nodular form is met with in colder regions. Leprosy is rare in children, and is more common in males than in females.

There is much difference of opinion as to the contagiousness of leprosy, some authorities of large experience affirming and some denying this quality of the disease; but when we remember its bacillary nature, the clinical evidence of its inoculation by vaccination (Arning), and its probable propagation by the many intimate contacts of life, there is good ground for accepting an affirmative position on this question. In the same way, the possibility of its transmission by heredity has been both accepted and disputed. On the whole, however, it must be confessed that the reasons for believing in its direct parental transmission are sufficiently strong, especially when the unusually long period of incubation is considered. It is only right to state that good observers believe that only a predisposition is inherited, and that the opportunity for inoculation is afforded by the necessarily close relationship of family life.

It is a curious fact, according to Bidentkap, that leprosy is rare in cities, but common in the country, and this not only in Norway, but in other parts of the world.

As regards its geographical distribution, leprosy is endemic in Norway, Iceland, to a less degree in some portions of Southern Europe, in Africa, Asia, the islands of the Pacific, South and Central America, Mexico and in the West Indies. On our own continent there is a leper settlement in New Brunswick, and it seems that there was a leper hospital in New Orleans in the latter part of the



last century. In recent years a number of cases have been reported as occurring in Louisiana and South Carolina; besides, the disease is known to exist among Norwegian immigrants in the Northwestern States and among the Chinese on the Pacific coast. A few instances are recorded of persons in the United States afflicted with leprosy who have never in any way been exposed to the disease. White declares that if the authenticity of such cases be established, it would give color to the supposition that the disease may have a sporadic origin, but it is likely that in some manner exposure has occurred.

It is now conceded that the direct exciting cause of leprosy is the bacillus discovered by A. Hansen in 1874, notwithstanding the fact that we are ignorant of its method of attack, and experimental inoculation and bacteriological investigation have thrown but little light on the subject.<sup>1</sup>

Under the microscope the nodules of leprosy are found to be made up of granulation tissue which originates in the corium. Large cells are present, the lepra cells, which are thought by Neisser and Thin to be exudation cells which are enlarged under the influence of the bacilli that they contain. There are also giant cells, lying mostly at the periphery of the nodule. In the nerves the process begins as a round-cell infiltration in the perineurium, which as it increases leads to an irritation of the nerve-fibers with hyperæsthesia, and finally to an atrophy of the axis-cylinder with anæsthesia.

The bacilli of lepra are found in the lesions of the malady either enclosed in the cells or lying free, often in little masses. Though these bacilli have been discovered in all the primary lesions, they have not been demonstrated in the secondary lesions, such as bullæ and diseased bones. There is a difference of opinion as to whether the bacilli occur in the blood. The lepra bacillus is smaller than the tubercle bacillus and of more irregular shape, often pre-

<sup>1</sup> Campana and Ducrey have succeeded in cultivating bacilli apparently similar to those of lepra.



senting slight enlargement of the ends. It can be demonstrated in secretions from ulcers or in sections or scrapings from affected tissues by staining with carbol-fuchsin and decolorizing with nitric acid.

**DIAGNOSIS.** In countries where leprosy prevails as an epidemic the prodromic symptoms are always likely to arouse suspicion, but where the disease is occasional they are apt to be confounded with malaria or rheumatism until the appearance of the more distinctive features of the disease, such as anæsthesia and leprous macules, puts the diagnosis at rest. It is quite possible to mistake macular leprosy for exudative erythema and the erythematous syphilide, but in both these conditions there is no alteration of cutaneous sensibility—that is, hyperæsthesia or anæsthesia—and the appearance of the lesions is different; besides, as regards syphilis, there would at this time be other symptoms present.

Tubercular syphilis and nodular leprosy bear a close resemblance if considered superficially, but the tubercles of lepra have especial sites where those of syphilis are rarely found; their course is slower, and anæsthesia may be present. The nodules of lupus have a more chronic history, a dissimilar course and a different arrangement. In ulcerative lesions of the palate and nose the history of the case and the concomitant symptoms must receive due weight in reaching a conclusion.

Leprosy should also be differentiated from syringomyelia, leucoderma, morphœa, pemphigus and progressive muscular atrophy. Examination for the lepra bacillus should always be made.

**TREATMENT.** Whatever theory may be maintained as to the contagiousness of leprosy, there is no doubt of the advisability of enforcing segregation of all lepers. The wisdom of this course has been repeatedly demonstrated, and nowhere more satisfactorily than in Norway. When practicable, infected persons should be removed from districts where the disease is endemic and put under the best possible hygienic conditions. A generous diet with a



good wine is advised by Hutchinson, and appropriate tonic remedies should be given as demanded.

The so-called specific treatment is far from encouraging, and the results obtained are by no means uniform. There are two remedies, however, that have stood the test of time, and, although not radical in their results, have proved most satisfactory in a variety of ways. These are chaulmoogra oil and gurjun oil. They may be used both internally and locally. Chaulmoogra oil should be administered in capsules, beginning with three minims after meals thrice daily, and gradually increasing to the point of tolerance, which, however, is soon reached. An ointment of the oil made with an equal quantity of lard should be thoroughly rubbed in for two or three hours daily, preceded when necessary by a bath. Gurjun oil may also be employed in the same manner, and is held in high esteem by many practitioners. Tilbury Fox recommends the following formula :

R.	Olei gurjun,	℥v.
	Tr. quillæ,	℥jss.
	Pulv. tragacanthæ,	℥ij.
	Ess. limonis,	℥xx.
	Tr. limonis,	℥j.
	Aquæ,	q. s. ad ℥x.
	Ft. emuls.	M.
S.	A teaspoonful to a tablespoonful twice daily.	

For local use a liniment may be made of equal parts of the oil and lime water.

Piffard and G. H. Fox praise strychnia in the treatment of leprosy, and Unna lauds ichthyol. The latter also uses a salve of ichthyol, chrysarobin, pyrogallol and salicylic acid, rubbed up with vaseline, for application to the lesions. Morris says that arsenic is sometimes of marked value in skin leprosy. Arning advises salicylic acid, ten per cent. in oleic acid, and also thinks favorably of salicylate of soda.

Dyer<sup>1</sup> in his excellent article refers to the use of chlo-

<sup>1</sup> Loomis, System of Pract. Med., Lea Bros. & Co., 1897.



rate of potassium given in unusually large doses, as high as 180 grains a day or even more, and speaks rather favorably of it. He begins with small doses and increases the amount of the drug up to the point of tolerance. The same authority is now investigating the effect of attenuated snake venom upon leprosy. Carrasquilla has reported favorably upon some cases treated with serum taken from horses immunized by means of blood serum got from lepers. Others have employed this method without advantage.

Crocker regards the intra-muscular injections of perchloride of mercury with much favor, and T. C. Fox thinks this treatment will prove of distinct value.

Leprous ulcerations should be treated on general surgical principles. Massage and nerve-stretching are to be employed in suitable cases. Warm sulphur baths are useful and agreeable. Incidental symptoms, fever, diarrhœa, should receive symptomatic treatment.

PROGNOSIS. The prognosis is unfavorable, most cases terminating fatally in the course of years. Anæsthetic leprosy admits of a better prognosis than the tubercular form. The mixed form is most rapidly fatal. It is a possibility that any variety of the disease may be arrested in its course, or even exhibit some improvement in its established symptoms, but such cases are excessively rare.

#### MORVAN'S DISEASE.

Morvan, in 1883, described an affection characterized in the beginning by neuralgic pains and various disorders of sensation and loss of muscular power. The upper extremities are usually affected, the symptoms making their appearance more or less gradually. Later on bullæ, painless whitlows and subsequent necrosis of the phalanges occur. There also supervenes wasting of the inter-osseous muscles, and from a like muscular atrophy the peculiar appearance of the hand known as *main en griffe* is established. Syringomyelia was found on autopsy in cases examined by Joffroy and Achard. As is well known Zam-



baco thought the disease was a modified leprosy. The disorder is regarded by some pathologists as a combination of neuritis and syringomyelia.

#### COLLOID DEGENERATION OF THE SKIN.

Several cases of this form of degeneration first described by Wagner have been reported of late years. The affection is characterized by small shining, lemon-yellow papules that have the appearance of vesicles; but when pricked they exude no fluid, but a yellowish jelly. The disease seems to be limited to the upper part of the face, especially the forehead, malar regions and the bridge of the nose. It should not be confounded with papular xanthoma, for in this latter disorder the lesions are not translucent in appearance, and the color is more subdued.

The treatment of colloid degeneration is to enucleate the deposit with a dermal curette, or to effect destruction by electrolysis.

#### ADENOMA SEBACEUM.

This disorder, which is characterized by small growths having their origin in hyperplasia of the sebaceous glands, was described years since by Addison and Gull and Rayer, but its true anatomical nature was first pointed out by Balzer. The lesions occur on the face, most abundantly at the sides of the nose, but they are also to be noted on the forehead and other parts of the face. As a rule they are distributed symmetrically, but exceptionally they may be unilateral. The little tumors are firm to the touch, smooth or rough, whitish or yellowish or of a bright crimson hue from the development of telangiectases. The tumors present no apertures, but a little inspissated sebum may be pressed out after pricking. The growths are apparently congenital in some cases, or occur early in infancy, but an increase in their size and number is to be noted at puberty. In Pollitzer's case, however, the disease appeared first after the thirty-first year. No subjective symptoms are present. For the most part the tumors



undergo no change, but spontaneous involution occurs sometimes in some of them. Fibromata, warts, nævi and anomalies of pigmentation are often seen in connection with the affection. In many instances the patients are

FIG. 29.



Adenoma Sebaceum.

epileptics or are otherwise mentally defective, but Anderson reports a case associated with mollusca fibrosa occurring in a male, non-congenital, and in which the patient's intellectual condition was not deficient. An exact diagnosis is exceedingly difficult without a microscopical ex-



amination, but it is well to bear in mind the possibility of confounding adenoma sebaceum with colloid milium, multiple benign cystic epithelioma, acne rosacea and the nodules of lupus vulgaris.

The treatment is by excision, or preferably by electrolysis.

### MULTIPLE BENIGN CYSTIC EPITHELIOMA.

The disorder has been described under a great variety of names, viz., hydradénomes éruptifs, syringo-cystadenoma, epithelioma adenoides cysticum, etc. Unna claims that two different affections have been confused under these titles, namely syringadenoma, and the disorder under consideration, which he prefers to call acanthoma adenoides cysticum.<sup>1</sup> While the question is of interest from an histopathological standpoint it cannot be gone into here, and in this place will be given briefly the principal features of Fordyce's case, which also agree with those of Brooke and Perry. According to Fordyce<sup>2</sup> the malady affects the face, chest, back and upper extremities, and is characterized by the appearance of small, pale yellow, pearly or pinkish colored tumors varying in size from a pin's head to a pea. The little growths are embedded in the skin and project above the surface. They are firm to the touch and painless, the larger tumors being tense, shiny, freely movable, and occasionally exhibiting a central depression. Some of them are translucent and look like vesicles; others are made up of milium-like bodies and are traversed by small vessels. The disease makes its appearance at or before puberty. The tumors enlarge until they reach the size of a pea, rarely greater, and never undergo involution or ulceration.<sup>3</sup> In Brooke's and Fordyce's cases there was evidence of heredity. The tumors bear no relation to the sweat glands, but represent histologically an epitheli-

<sup>1</sup> See Unna's Histopathology of the Skin.

<sup>2</sup> Morrow's System, p. 620.

<sup>3</sup> In White's case reported as an example of this affection there was ulceration and an evident tendency to malignant degeneration, besides presenting other differences.



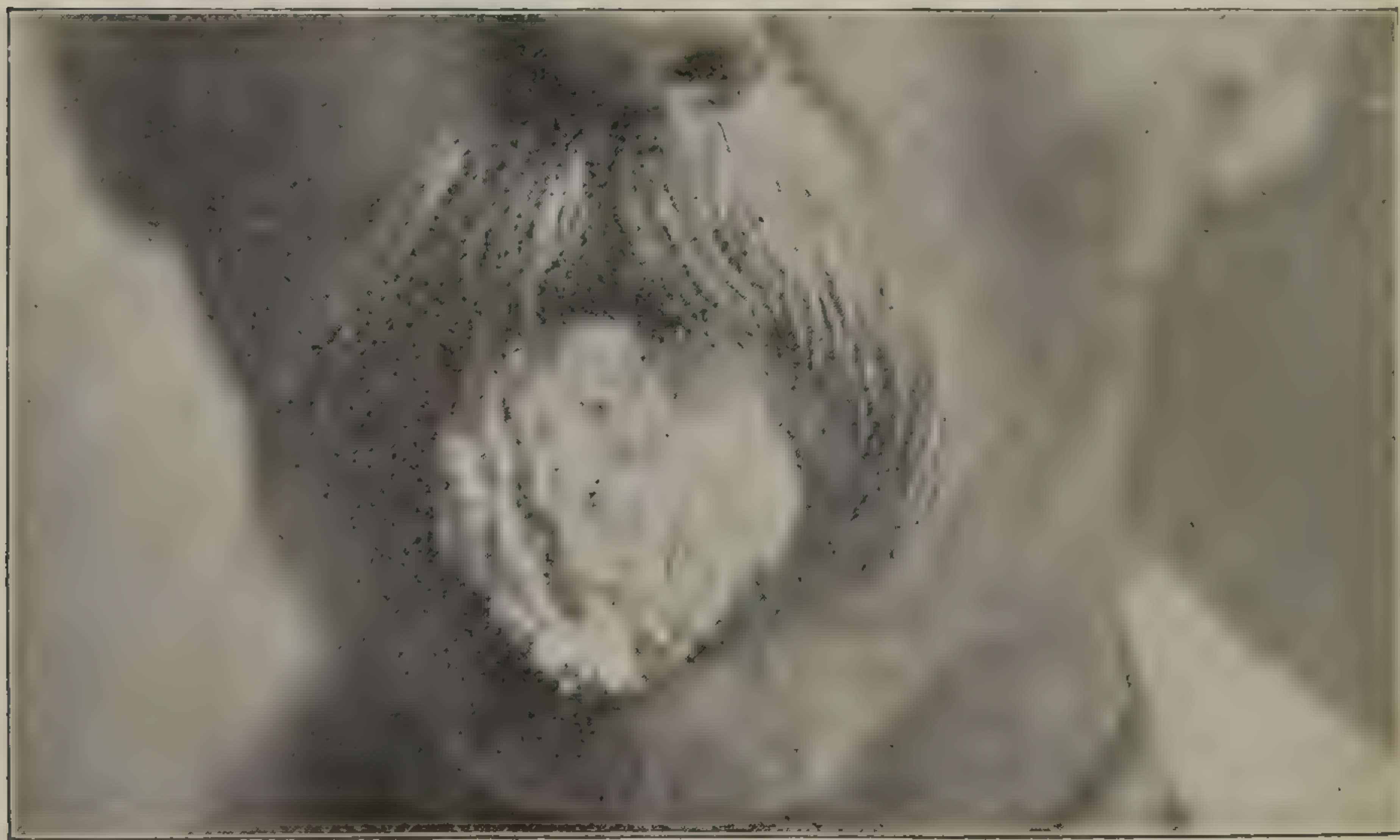
oma of the skin, accompanied by colloid degeneration and the formation of small cysts (Bowen).

The treatment is by incision and squeezing out the contents. Electrolysis would answer as well or better.

### LEUCOKERATOSIS BUCCALIS.

This affection also known as leucoplakia, psoriasis linguæ, ichthyosis linguæ and smokers' patches was first described by Bazin in 1868, and later more especially by Debove, Schwimmer and others. Although Schwimmer is of opinion that the disease makes its first appearance in the form of dark red spots this is not the common experience, but on the contrary the lesions seem to be from the beginning of a pearly or slate-gray color. The lesions vary in size from a small point to areas covering extensive

FIG. 30.



Leucokeratosis Buccalis.

regions of the affected parts. Any part of the oral mucous membrane may be attacked, even the gums, but a common site is the tongue and that portion of the cheek on a line with the teeth when the latter are closed. The patches in the beginning are usually well defined, irregular



in outline, barely elevated, and somewhat dry and rough; but the epithelium may be peeled off, displaying a smooth red surface that is apt to bleed. At an advanced stage of the disease cracks may develop and the parts become stiff and dry. Hypertrophy of the papillæ of the tongue may occur and may take on a nodular appearance. Unless as a result of some constantly acting irritation the patches may even pass unobserved, the disease remain quiescent and in rare instances entirely disappear. On the other hand the condition of leucokeratosis may be general from the beginning, or else rapidly spread by extension of single or by the confluence of several lesions. The danger of epitheliomatous degeneration in these cases is always to be feared, appearing as a development out of a warty outgrowth, from a submucous nodule, or in the shape of an ulcer with indurated borders. Leloir thinks that the epitheliomatous change is due indirectly to chronic irritation and is not an essential development from the hyperkeratotic condition. This disorder occurs mainly in the middle period of life and in the male sex. Syphilis and tobacco smoking are the usually assigned causes of the malady, but it is known that it may occur independently of either of these conditions. Among exciting or at least complicating factors may be mentioned spiced foods, strong drinks, the irritation of ill-fitting dental plates, etc.

Fordyce states that the hyperkeratosis is the result of the impaired nutrition of the epidermis rather than the cause of the underlying cell infiltration; other authorities are of the opinion that these alterations are secondary to the alterations in the epithelium. However, there is a marked thickening of the horny layer, the cells of which preserve their nuclei, an obliteration of the papillæ, or an hypertrophy of the interpapillary processes, an infiltration in the derma, and lastly a sclerotic condition of the submucous tissues is established.

The mouth and teeth should be looked after, all sources of irritation removed, and the use of alcohol and tobacco prohibited.



Under such management some cases recover or else give no further trouble.

Treatment by caustics and other heroic measures should be deprecated; but exceptionally ulcers and cracks may be lightly touched with lunar caustic or blue stone. Suspicious growths, or indurated ulcers should be removed by surgical means. It is fair to say that some physicians advise more or less energetic treatment. Leistikow uses this paste :

R.	Terræ siliciæ,	℥jss.
	Resorcini,	℥iij.
	Adipis,	℥ss. M.

This is to be applied with a piece of wood several times a day, especially after meals and at bedtime. After a time the use of the paste becomes painful, when it is to be stopped and the mouth washed frequently with borax-peppermint water and balsam of Peru applied to the patch. Pencilling on the parts a twenty per cent. solution of iodide of potassium has also been recommended.

### KERATOSIS FOLLICULARIS (DARIER'S DISEASE).

The first cases of this rare skin affection were described about the same time by J. C. White<sup>1</sup> and Darier.<sup>2</sup> Since that time some twenty cases have been observed in different parts of the world, four of which are American. Its association with the name of Darier, and the great interest taken in this comparatively infrequent disorder, was especially due to the French observer's conception of its pathology, and the probability that other maladies as well acknowledged a like causation, that is, protozoan infection. It has turned out, however, that White and Bowen were correct in their appreciation of the nature of the disorder and that, pathologically, Darier was wrong.

Keratosis follicularis is characterized as regards its

<sup>1</sup> Jour. Cutan. and Genito-urin. Dis., June, 1889.

<sup>2</sup> Ann. Derm. et de Syph., July, 1889. Previously reported to the Société de Biologie in March, 1889.



lesions by the appearance of pinhead-sized solid papules that in the beginning differ little in color from the rest of the skin, but later, after increasing in size, they take on a darker hue, and are covered with a hard, grayish or blackish scale that dips down into the duct of the pilo-sebaceous follicle. In Bowen's case<sup>1</sup> the top of some of the lesions showed a minute pustule instead of the fatty plug, and in passing the finger over a patch of the eruption the sensation was that of a nutmeg grater.

The lesions may be found upon any part of the body, but certain localities, such as the face, scalp, breast and inguinal and hypogastric regions are preferentially attacked. In a large number of cases the initial point of attack was the head and face, thence extending downwards. Bowen has recorded a case in which the affection was limited to the head and hands.

Corresponding with the deepening in color and increase in size of the lesions, they also tend to run together, and display here and there spine-like projections and even horny excrescences. In certain localities, such as behind the ears, and in the hypogastric and inguinal regions, the eruption may take on a papillomatous aspect and ulceration may occur. In Bowen's case the labia majora were the seat of prominent lesions, some of them the size of a pea, and the parts through confluence of the eruptive elements had become greatly thickened and papillomatous. On the scalp the disease suggests a seborrhœal eczema. The backs of the hands also show verrucous elevations, and sometimes plaques of thickened scaly skin, and the palms and soles may be affected, though to a less degree. The nails are thickened and furrowed and are quite brittle. The disease, with periods of quiet and stages of exacerbation, progresses slowly but surely until most of the body is involved. Itching is usually slight, but pain may occur from the presence of ulcerations. A disagreeable odor is often to be noted. The general health is usually good.

<sup>1</sup>Jour. Cutan. and Genito-urin. Dis., June, 1896. A valuable study of the whole subject.



Bowen thinks that the disease begins in early life. In several it was observed in infancy, and in Boeck's five cases it began between the eighth and sixteenth years. In twenty recorded cases thirteen were males and seven females. As is well known, Darier regarded the disease as a follicular psorospermiosis and named the affection "*psorospermo folliculaire végétante*." This view was also shared by others, but to-day it has been almost generally abandoned, and it is thought that the so-called coccidia are merely transformed cells. Boeck,<sup>1</sup> for example, regards the "round bodies" as prematurely cornified prickle cells and the "grains" as probably degenerated prickle cells. This same authority, as well as other observers, does not recognize the follicles as the principal and primary seat of the affection, but Bowen regards the process as essentially a keratosis of those structures. The disease should be differentiated from lichen planus and pityriasis rubra pilaris.

Treatment, beyond ameliorating certain local symptoms, has been of no avail, but since West has reported a good result from thyroid extract in a case of Devergie's disease this same substance might prove of benefit in keratosis follicularis.

#### KERATOSIS FOLLICULARIS CONTAGIOSA.

H. G. Brooke under this title has called attention to an abnormality of cornification, which he has observed as a contagious affection in children. The disease appeared on the extensor surfaces of the limbs, the neck and trunk, but also extended to other parts.

In the involved regions there was a general thickening of the skin with exaggeration of the natural lines. Within the areas thus formed small black spots were visible, which finally became raised into papules, and the whole of the affected region took on a dirty yellow color. From these papules in most instances a spine projected, and some of them became subacutely inflamed. In some situations in-

<sup>1</sup> Quoted by Unna in his *Histopathologie*.



stead of spines the larger papules presented comedo-like horny plugs.

These features were more or less evident in all the cases, and its contagious nature seems to be beyond doubt. The process is a hyperplasia of the epithelial cells combined with a modification of the horning process.

The earliest effect of the external exciting cause is apparent upon the lower layers of the stratum granulosum, the chief point of attack being the common follicle of the hair and sebaceous glands.

The treatment, which was effectual, consisted in inunctions of mollin.

### MOLLUSCUM EPITHELIALE.

This disease is also known by the names of molluscum sebaceum and molluscum contagiosum. It is a very striking disorder, and once seen is not apt to be forgotten. The lesions in the beginning are very small, pin-head size, perhaps, of a pinkish or whitish color, but in the course of weeks or months they may get to be as big as a pea, although exceptionally they may be somewhat larger. Generally they are sessile, and the skin over them is stretched and glistening, giving the little tumors the appearance of drops of wax. To the touch they are firm, but they become softer as they grow older. In most instances the lesions are umbilicated, with a central spot indicating the mouth of the follicle. From the larger tumors a milky or gruel-like fluid may be squeezed from the central aperture. By slightly enlarging the orifice a waxy, pinkish mass may be expressed. The mollusca may finally inflame and discharge their contents through supuration. The growths are usually few in number, occur mostly in children and are chiefly to be found on the face, especially the eyelids, cheeks and chin, but they are also met with on the neck, breasts and genitals. Sometimes hundreds of tumors have been counted, and occasionally the lesions have been of extraordinary size (W. G. Smith). Subjective symptoms are absent.



Molluscum epitheliale is commoner in children than in adults, and it is said to be more often seen in females than males. As to the contagiousness of the disease opinions

FIG. 31.



Molluscum Epitheliale (Allen).

differ widely. English writers generally regard it as inoculable. Stelwagon, from a study of a number of cases, has reached the following conclusions, which I think are fully justified by our knowledge of the clinical facts bearing on the question :

1. That the disease is mostly seen on exposed parts, *e. g.*, the genitalia, with which the hands come in contact ;
2. That the disease is encountered mostly in children, and those of the poorer classes ;
3. The affection occurs mostly



PLATE II.



Author's Case of Carcinoma Lenticulare.







in groups or series, that is, in members of the same family, or among inmates of schools, asylums, etc. ; 4. That while admitting its contagious nature, it must be acknowledged that it possesses this property to a slight degree only. Neisser,<sup>1</sup> as the result of an extended anatomical investigation, reached the conclusion that the so-called molluscum corpuscle is an epithelial cell that has undergone a process of cornification and is filled with parasites and the remains of the nucleus. He looked upon the disease, therefore, as parasitic and contagious, although experiments in cultivation and inoculation had been negative. At the present day most observers are agreed that molluscum epitheliale is not a protozoan disease, but that the molluscum bodies are the result of degenerative changes in the epithelial cells of the epidermis (Gilchrist). Kuznitzky<sup>2</sup> regards the following points as established: 1. The disease is contagious; 2. It is the product of epithelial hypertrophy and has no relationship with the sebaceous glands; 3. The epithelial proliferation begins, as a rule, in the upper part of the mucous layer, and not in the apertures of the follicles or in the roots of the hair.

**DIAGNOSIS.** The small, flat, pearly or waxy looking growths with central apertures are quite characteristic. They sometimes look as if they contained fluid, but a prick with a needle will readily settle the point. For the differential diagnosis from molluscum fibrosum see fibroma.

**TREATMENT.** The little tumors may be slit up with a knife, the contents expressed, and the base touched with nitrate of silver. Electrolysis is also effectual.

**PROGNOSIS.** A radical cure may confidently be predicted, but if the destruction is ineffectual the growths are apt to reappear.

## CARCINOMA CUTIS.

Carcinoma of the skin occurs as scirrhus and epithelioma. Scirrhus is rare, and is usually secondary to some

<sup>1</sup> Vierteljahr f. Derm. u. Syph., 1888, Heft 4.

<sup>2</sup> Archiv. f. Derm. u. Syph., Bd. XXX., 1, 2.



deposit in other tissues, such as the breast. This form of cancer in reality often affects the subcutaneous tissue more than the true skin. In its etiology and anatomy it does not differ from scirrhus affecting other organs. Two varieties of scirrhus of the skin are recognized, the lenticular and the tuberose.

Carcinoma lenticulare begins as small shot- or pea-sized, firm nodules embedded in the skin. The color of these nodules varies from a light pink or purple to a deep red. Their number is variable, sometimes reaching to the hundreds. Besides the nodules in the skin, some seated in the subcutaneous tissue can often be felt. The growths in the skin are often situated on a dusky red or violaceous area of skin, which is occupied by a firm infiltration, over which dilated vessels may be seen coursing. The indurated area is usually sharply defined from the surrounding tissues. The hardening of the tissues may extend over a large portion of the body, as the thorax or abdomen, and by the stiffening which it causes interfering with motion. To this condition the name "cancer en cuirasse" has been applied. The lymphatics adjacent to the affected region become involved, and by the pressure of the growth upon the vessels œdema develops. As the disease extends the nodules coalesce, break down, and form ulcers which may fungate. The patient becomes cachectic, and may die from inanition or from a secondary cancer of some of the internal organs. (Plate II.)

Carcinoma tuberosum first develops as pea- to egg-sized masses in the subcutaneous tissue. The number present may be very great, almost the whole surface being involved. As the nodules increase in size the skin over them becomes stretched, red and shining, and eventually breaks down, leaving fungating ulcers. The tendency of this form of cancer is toward a rapidly fatal termination.

Formerly a melanotic cancer of the skin was described, but this is now recognized as a sarcoma.

No treatment has ever availed anything in the cure of either form of carcinoma of the skin above described.



The only thing for the surgeon is to endeavor to make the condition of the patient as bearable as possible.

### EPITHELIOMA.

The clinical appearances presented by epithelioma vary according to the stage of the disease, its situation and its anatomical peculiarities. It is usual to describe these variations under three heads—superficial epithelioma, deep-seated epithelioma and papillary epithelioma.

The superficial form of the malady often first appears as yellowish or reddish, sometimes warty, papules of the size of a pin head or a little larger. Several such papules may coalesce to form a small lobulated tumor over and around which dilated vessels may be seen. At other times the origin of this variety of epithelioma may be a wart, mole or a flat infiltration of the skin. After a variable time, though usually not for years, a crust forms upon the lesion. When this is removed a shallow, red, superficial ulceration is exposed, the edges and base of which present a thin though firm induration. The ulceration gradually extends both peripherally and in depth, and the induration grows more marked. After the sore has existed for a long time large areas may be destroyed, all the tissues down to the bones being eaten away, and even the bones themselves being attacked. There is no tendency to involvement of the lymphatics, the disease remaining wholly local. When life is destroyed it is because a vital organ has been involved or by a gradual exhaustion of the powers.

As a general thing, in this form of epithelioma in the earlier stages pain is not pronounced, but in the later course of the affection this symptom may add greatly to the evils of the patient's situation.

The superficial form of epithelioma occurs most often upon the face, though it may be found upon other parts of the body. It is this form of epithelioma which has been called by English surgeons rodent ulcer. For a long time there has been a dispute as to whether rodent ulcers are



to be regarded as epitheliomata. This question is now almost unanimously settled in the affirmative. Rodent ulcer is to be regarded as an epithelioma which presents the clinical peculiarities of being extremely slow in growth,

FIG. 32



Epithelioma (G. H. Fox).

not, as a rule, painful, and with little tendency to new growth as compared to the amount of destruction. It is proper to state that certain excellent authorities look upon the rodent ulcer as clinically and pathologically distinct from the flat epithelioma. A. R. Robinson regards it as a degenerative process and not as a new formation.<sup>1</sup>

The deep-seated epithelioma may develop from the superficial form, but more commonly it commences as an infiltration set deep in the skin. The growth may in the beginning lie in the subcutaneous tissue, or it may project above the skin as a round or flat or lobulated tumor. The skin over it is reddish or purple, and dilated vessels are often seen running over the surface. The tumor is very hard to the touch, and though at first freely movable over the deeper structures, in the course of time it becomes firmly adherent. Ulceration is the ultimate result of the morbid process. The appearance of the ulcer differs much in different cases. Generally the edges are everted, irregular, infiltrated and of a livid color, while the floor is

<sup>1</sup> Am. Text-book Genito-urin. Dis., Syphilis and Dis. of Skin, 1898.



uneven and may be covered with a crust. There is a thin viscid discharge which becomes purulent and offensive if the necrosis is rapid.

The course of this variety of epithelioma is much more rapid than the superficial form. The lymphatics become involved, cachexia is established and the patient dies in the course of a few months or at most at the end of three or four years. This form of epithelioma is painful, often severely so, from the first.

The common sites for deep-seated epithelioma are the lower lip, the tongue and the external genitals, though it may occur upon any part of the body.

In either one of the above described forms of epithelioma the papillæ may become greatly hypertrophied, giving to the cancer a peculiar appearance to which the name papillary epithelioma is applied. Sometimes the enlarged papillæ are present from the first; this is especially apt to be the case if the cancer has originated from a wart. The papillary epithelioma may be sessile or pedunculated. Its color is usually a bright red, and the tumor bleeds easily. Between the papillæ fissures form, from which issues a sticky, sanguinolent and offensive discharge. The base upon which the papillæ are situated is infiltrated. In the course of time the tissue breaks down, with the formation of an ulcer which pursues the usual course of an epitheliomatous ulcer.

Heredity plays a smaller part in the etiology of cancer than was at one time supposed. Cancers of the skin, like carcinomata of other organs, are in some way intimately associated with the retrogressive changes of declining life. Thus rarely does an epithelioma of the skin occur before the fortieth year.<sup>1</sup> Epitheliomata are prone to form at points which are subject to constant irritation; epithelioma of the lower lip is common among pipe-

<sup>1</sup> Hartzell, however (N. Y. Med. Jour., March 5, 1898), reports a case of epithelioma (rodent ulcer) in a boy of fourteen years, and quotes a number of instances of early attacks found in literature. It would seem that the so-called rodent ulcer has a tendency to occur earlier than other varieties of epithelioma.



smokers. Certain occupations predispose to epithelioma, because they afford means for local irritation. We have seen how often epitheliomata start from warts and moles. Other neoplasms, such as cutaneous horns, sebaceous cysts and scars, are frequently the starting points for these growths.

To-day the idea that cancer is of parasitic origin is rapidly gaining ground. It is, however, evident that for cancer to attack the organism something more than the inoculation of the parasite is necessary—namely, predisposition.

Epitheliomata consist of epithelial plugs which grow downward into the skin and tissues underlying it, forming an alveolar structure in which the epithelial masses are separated by bands of connective tissue. The growth may originate from the glands of the skin or from the inter-papillary processes. Generally the outer layer of one of the epithelial processes consists of cylindrical cells, internal to which are polygonal cells, while in the center cornified cells are arranged in concentric layers, the so-called epithelial pearls. The blood vessels run in the interlobular tissue. The septa between the lobules, as well as the tissue surrounding the tumor, are the sites of a small-cell infiltration. The anatomy of rodent ulcer, according to Thin, differs from epithelioma in the following particulars: The nuclei of the cells are fairly uniform in size, the protoplasm is scanty and not granular, and the cell-wall not discernible. The cells never enlarge into the flat horny cells of epithelioma, never form nests, and do not retain the dye of eosin.

In the epithelial cells many observers have described structures which they have thought were the parasites of cancer. Ruffer, Foà and Plimmer have described a parasite consisting of a central corpuscle or nucleus not staining with basic aniline colors, surrounded by a clear protoplasm, the whole enclosed in a distinct capsule. As is well known, however, these conclusions are disputed.

**DIAGNOSIS.** The surest way of making a diagnosis of



epithelioma is by submitting portions of the tumor to a microscopic examination. Clinically, epithelioma must be distinguished from lupus, syphilis, innocent papillomata, seborrhœa and rhinoscleroma. Lupus develops in most cases before the age at which we find epithelioma; there is no induration, the lesions are multiple, the discharge is more purulent, and not sanious or offensive, and the apple-jelly nodules are usually to be seen around the edge of the affected parts.

Syphilitic tubercles and ulcerative processes are to be differentiated from cancer by the history of the case, the absence of pain, and the more rapid evolution of the lesions. Syphilitic tubercles are grouped and ulceration will begin at several points, the ulcers being punched out and secreting an abundant yellowish pus. The border of the syphilitic ulcer is not indurated as in epithelioma.

It is sometimes difficult, when a wart has been irritated, to say whether it has become epitheliomatous, but a safe rule is to treat the condition just as if it were malignant.

In the early stage of epithelioma, before ulceration has occurred, it is possible to confound it with seborrhœa. In seborrhœa the skin is not infiltrated, and the crusts are composed of dried sebum and epithelial scales, which, when removed, exhibit distended sebaceous follicles. The localized hypertrophy of the skin called keratosis senilis is sometimes very difficult to distinguish from epithelioma. The principal point of difference between keratosis and epithelioma is that epithelioma is usually single, while keratosis is often found in more than one place; as keratosis senilis is not infrequently the starting point for epithelioma, it is of the greatest importance to watch all cases of this affection with care.

Rhinoscleroma occurs most often on the upper lip, about the nares—a site very rare for epithelioma. Rhinoscleroma does not ulcerate, but this forms a comparatively early step in the evolution of epithelioma. Finally, a microscopic examination might reveal the bacilli of rhinoscleroma.



TREATMENT. No internal treatment has as yet been discovered which will arrest the progress of cancer. In the later stages of the disease supporting measures, together with anodynes to relieve pain, must be used.

The curative treatment of epithelioma is wholly local. The object to be attained is the complete destruction of all cancerous tissues. That method which accomplishes this result most surely, with the least pain and inconvenience to the patient and with the minimum of subsequent deformity, is to be chosen; but it is always to be borne in mind that no considerations of a cosmetic sort can ever excuse the surgeon from making the destruction thorough. The local measures which have been advocated are removal of the growth with the knife or curette, destruction by caustics or electricity, the application of parasiticide remedies, and inoculation with specific germs which are supposed to be antagonistic to the organisms which cause cancer.

Removal by the knife has the advantages that it is exact, that it is less painful than most other methods, and that the removal can be accomplished at one operation. In regions where sufficient tissue can be spared to ensure an incision wide of the diseased area it is the ideal method. But excision has certain drawbacks. It is a matter of guesswork how far outside the apparently involved area the incision must extend, as we have no means of determining the distance to which single cancer-cells or groups of cells have penetrated into the surrounding tissues. If any of these cells are left, recurrence is very likely to occur, especially if primary union of the wound take place, for by this method of healing any advantage to be derived from the influence of inflammatory action on the remaining cancer-cells is lost. For this reason many recommend that after removal of an epithelioma the wound be cauterized and left to heal by granulation. It is a further disadvantage of the knife that by its use no selective action is exercised, but the healthy tissue inside the lines of the incision is removed along with the diseased. The result-



ing deformity is thus greater than by some other methods, and in certain regions, such as the nose or the eyelid, this is a matter of no small importance.

Although the curette has been strongly recommended, its use is very limited. If with the knife the removal of all the new growth is a matter of great difficulty, it may be said to be almost impossible with the curette. The curette should be used to prepare the way for other treatment, as by removing the softer or necrotic portions of a growth, so that a caustic or other remedy may act more rapidly and thoroughly.

Caustics have long been employed in the treatment of cancerous growths. It is unfortunate that they constitute the principal means of treatment employed by charlatans, since on this account they have been somewhat neglected by physicians. A great number of chemical preparations have been used for the purpose of producing destruction by cauterization, among which may be mentioned arsenic, caustic potash, chloride of zinc, nitrate of silver, the stronger mineral acids, carbolic acid, acid nitrate of mercury, ethylate of soda, lactic acid and pyrogallie acid. The use of a caustic agent has the advantage that the area of action is not limited to the line of application, as is the case when the knife is used. The inflammatory reaction influences the tissues to a greater or less distance around the area to which it is actually applied. While this inflammatory disturbance will not be great enough to destroy the normal cells within its sphere of influence, the cancer-cells may be destroyed, as we know that their physiological resistance is less than that of the normal cell. Thus with a properly selected caustic we can accomplish destruction of the diseased tissue with small loss of the unaffected portions. Robinson<sup>1</sup> believes that during the action of a caustic a tox-albumin is formed which acts in an unfavorable manner upon the cause of cancer. He supports this opinion by a reference to the decrease in size of glands at a distance from the growth, which were

<sup>1</sup> International Journal of Surgery, July, 1892.



presumably the seats of secondary infection, that he has observed after the use of a caustic. Some caustic agents, such as arsenic and pyrogallie acid, have a selective affinity for cancerous tissue, destroying it, while the normal parts are left comparatively unaffected. The caustics which are most valuable are arsenious acid, chloride of zinc, and caustic potash.

Arsenic is used in the form of a paste made by rubbing together equal parts of acacia and arsenious acid and adding enough water to make the mass of the consistency of butter. The paste should be freshly prepared each time it is used. It should be spread on a piece of cloth large enough to extend beyond the elevated margin of the tumor. This may be held in place in contact with the tumor by means of strips of adhesive plaster. Marsden originally recommended that a space not larger than one square inch should be attacked at a time, but Robinson has applied the paste to a much larger surface and has not observed any injurious effects. Arsenic is not a suitable remedy about the lips and mucous membranes on account of the danger of absorption. The application of the paste is usually accompanied by considerable pain. The remedy should be allowed to act continuously for from fourteen to twenty hours. If the pain is not too great and the evidences of inflammatory reaction not severe, the use of the paste should be continued the full limit of time, as it has been found that it takes arsenic longer than this to destroy the normal skin. If upon removal of the drug all the cancer mass seems to be necrosed, and there is considerable inflammation extending around it, the action may be regarded as sufficient. If such a result is not secured, the caustic must be reapplied till the desired effect is obtained. The resulting wound should be dressed with a soothing salve. If it heals promptly from all sides, the treatment may be considered successful, but if at any portion the healing is slow, or if unhealthy granulation spring up, the paste must be again applied to that portion.

Chloride of zinc may be used in the stick form, in solu-



tion, or as a paste. The use of this caustic is attended with more pain than follows the application of arsenic. In the stick form chloride of zinc is especially suitable for cauterizing epitheliomata at the inner canthus or on the lids, as its action is easily controlled. In solutions of the strength of fifty per cent. or less it is of great service in cauterizing wounds after excision of a growth. As a paste, zinc chloride is one of the most reliable agents for the destruction of epitheliomata. Bourgard's formula for the paste is :

℞. Farinæ tritici,	
Amyli,	āā ʒj.
Acidi arseniosi,	gr. viij.
Hydrarg. sulph. rub.,	gr. xl.
Ammonii muriat.,	gr. xl.
Hydrarg. bichloridi,	gr. iv.
Zinci chloridi cryst.,	ʒj.
Aquæ bullientis,	ʒjss. M.

All the ingredients except the zinc and water are finely ground together. The zinc is then dissolved in the water, and this is poured upon the powder, stirring all the time. The paste after standing twenty-four hours is ready for use.

The paste is to be spread on cotton or linen cloth and applied to the epithelioma for twenty-four hours. If all the growth does not seem to be destroyed at the end of this time the paste is to be reapplied. On account of the severe pain caused by the chloride of zinc it is well to add cocaine to the paste. The treatment of the resulting wound is the same as after the use of arsenic. Cerny and Trunccek<sup>1</sup> highly recommend a mixture of arsenious acid with alcohol and water in the following proportions: Powdered arsenious acid, one gramme; ethylic alcohol and distilled water, of each seventy-five grammes. The growth is carefully cleaned, and if a few drops of blood appear so much the better; the arsenical mixture is then shaken and applied all over the ulcer with a brush. A little pain, lasting a few hours, usually follows. The next day the

<sup>1</sup> Medical Week, Paris, June 11, 1897.



ulceration is seen to be covered by a crust, but the application is made daily over the scab, causing it to turn from yellow to brown and at last to become almost black in color. The same treatment is continued regularly until the crust becomes readily detached, or until it is held in place by a few thin fibrous bands that may be cut through and the scab removed. When the first crust comes away the ulcer is again painted with the same solution. If only a thin yellowish pellicle results it may be assumed that all of the cancerous tissue has been removed; but if a thick, adherent crust forms, the treatment must be continued. The thicker the crust the more energetic must be the application, even to the extent of employing a 1 : 100 and even a 1 : 80 solution.

Caustic potash in the stick form is the caustic most highly prized by many authors. The advantage of the remedy is that it acts rapidly, so that considerable destruction is quickly produced. Its application is quite painful. Caustic potash has no selective action, destroying both normal and diseased tissues with equal facility. When it is important to save tissue it should not be used. On account of the difficulty of limiting the action of this caustic it should not be employed about the eye or in the vicinity of large vessels or other important structures.

Pyrogallic acid has had many warm advocates. Its action is slow and painless. It may be used in the form of an ointment :

R.	Acidi pyrogallici,	3ij.
	Emplast. plumbi,	3j.
	Cerati resinæ co.,	3v. M.

This is spread on cloth and kept constantly applied for from a day to a week according to the destruction necessary. The acid has a selective action, attacking very little the healthy tissues. It is a good remedy with which to follow the use of the curette.

The remedies mentioned constitute the most valuable of the caustics. Most of the others are not sufficiently de-



structive in their action, and are dangerous because they often serve rather as a stimulant than as caustic agents.

Electricity may be used in the treatment of epithelioma, either as the galvano-cautery or as the electrolytic needle. The galvano-cautery destroys the part to which it is applied, and has no advantages over the knife except that there is a slight amount of inflammatory reaction following its use, and that the operation is bloodless. The electrolytic needle affords a valuable method of treatment when a small epithelioma is to be destroyed, especially about the eyelid or other part where the destructive method used must be wholly within the control of the operator. The apparatus employed is that described under *nævus vascularis*. A rather stout needle is used, and this is thrust under the infiltrated base of the tumor, entering in healthy skin on one side and coming out through healthy skin on the other. The needle is thus passed from all sides till a complete destruction of the growth is secured. The necrosed mass may be left to separate by itself, or it may be at once scraped away and a solution of chloride of zinc applied to the wound. After the wound has had time to get rid of the slough it should be carefully inspected, and if any suspicious portions are seen these must be destroyed. It has seemed to me that the action of electrolysis is not confined to the tissues actually destroyed, but extends to parts apparently not injured, causing here perhaps the death of the specific cells, which are more readily injured than their normal neighbors.

Of the remedies which have been used in the treatment of epithelioma with a parasiticial intent, methylene blue has recently attained the best reputation. In one-half per cent. solution in the daily dose of one gramme it has been injected into the tumor, while at the same time the ulcerated surface has been dressed with compresses wet with a one per cent. solution of the drug. Darier<sup>1</sup> recommends the use of methylene blue in the following manner: The ulcerated surface is first freed from crusts, and the hard, thick

<sup>1</sup> *La Semaine médicale*, June 10, 1893.



border of the ulcer is lightly touched with the galvanocautery to promote the absorption of the drug. To the surface thus prepared a ten per cent. solution of methylene blue in equal parts of glycerine and alcohol is applied, and immediately afterward a twenty per cent. solution of chromic acid. The blue is then again applied and the epithelioma dressed with sublimate gauze. Four or five such applications are made at intervals of two or three days, and then the blue alone is used till the new formed skin no longer takes the blue color. It is claimed that by this method superficial epithelioma can be healed in from three weeks to two months. While methylene blue is being locally applied it may also be administered in the daily dose of  $\frac{3}{10}$  gr.<sup>1</sup>

Many observations have been from time to time recorded which show that cancerous tumors are not infrequently benefited or even cured by an inter-current attack of erysipelas. Fehleisen in 1883 made use of this fact by artificially inoculating certain inoperable cases of malignant tumors with the germs of erysipelas. Coley has recently collected a number of cases of carcinomata in which erysipelas occurred either accidentally or after intentional inoculation, with cure in a few cases and benefit in others.<sup>2</sup> The toxic products of the growth of the germs have also been used, but the results have not as yet been so good as where the disease was actually inoculated.

**PROGNOSIS.** In its ultimate outcome, epithelioma must always be looked upon as a grave disorder, although the superficial and circumscribed forms, if treated early and radically, may not return after operation. Even in more serious cases efficient treatment may do much to stay its progress. It must also be remembered that the march of the disease is often very slow, sometimes occupying years; but again the onset may be much more rapid, especially in the deep-seated varieties of skin cancer.

<sup>1</sup> American Journal of Medical Sciences, May, 1893.

<sup>2</sup> Coley states, after a considerable further experience, that the treatment of carcinoma with the toxins of erysipelas and bacillus prodigiosus is not at all promising. Canadian Pract., Oct., 1896.



## PAGET'S DISEASE OF THE NIPPLE.

Paget's disease of the nipple has also been called malignant papillary dermatitis, on account of its tendency to eventuate in carcinoma. The disease almost always commences on the nipple, though a case has been reported affecting the scrotum and Ravogli records a similar affection of the nose. Women in the middle period of life or beyond are the common victims of the malady. As usually seen by the surgeon, the nipple and areola present a red, raw, granular surface, as though the epidermis had been completely removed. The edge of the affected area is sharply defined and abrupt, and if the disease has persisted for some time there is marked infiltration of the involved tissues. From the surface there is constantly exuding a clear, viscid matter. In many of the original cases reported by Paget cancer of the breast occurred in two or three years, but in other cases the malady has run a course of ten to twenty years. The subjective symptoms are tingling and burning.

It has always been a matter of dispute whether the disease is from the beginning cancerous in nature, or whether the malignancy is a secondary phenomenon consequent upon the constant irritation. The cases which Thin examined all showed a cancerous nature, but the cases were not in the earliest stages.

In the affected area, though the upper layers of the epidermis are partially or entirely lost, there is an increased development of the interpapillary processes, producing a compression or even obliteration of the papillæ. Scattered through the growth are collections of epithelial cells like cancer nests. The first malignant change in the breast seems to occur in the lactiferous ducts. The bodies which were thought to be psorosperms may be demonstrated by scraping the diseased surface and soaking the scrapings in liquor potassæ. The bodies are oval or round with a nucleus and a double-contoured cell-membrane. The psorospermiosis theory has been generally abandoned.

DIAGNOSIS. Eczema of the nipple is the disease with



which this affection is most likely to be confounded, and indeed, in the beginning, it would be a most difficult question to settle, especially as it is probable that such cases are really eczematous up to a certain time; but afterwards when the cancerous symptoms are predominant the diagnosis is much simplified. McCall Anderson offers the following points: Paget's disease of the nipple occurs mainly after the grand climacteric; eczema of the nipple and areola makes its appearance earlier, particularly during lactation; and also in scabies. In Paget's disease the affected surface is of a brilliant red, and raw and granular looking after removal of crusts; in eczema surface not so red and raw looking, and not granular, but often punctated. In Paget's disease there is superficial induration; in eczema the tissues are soft. The edge of the eruption in Paget's disease is abrupt and often elevated; in eczema not apt to be sharply defined, and not elevated. Moreover, Liveing points out that Paget's disease is unsymmetrical. Finally, retraction of the nipple, lancinating pains, induration of the breast and involvement of the glands puts the diagnosis beyond question.

**TREATMENT.** In the earlier stages, as it is often extremely difficult to determine the true nature of Paget's disease, the affected region should be treated with soothing salves, such as would be used in eczema. Under no circumstances should irritants or mild caustics be used, since they simply aggravate the condition. As soon as the true nature of the malady is made out the breast should be entirely removed.

**PROGNOSIS.** The disease may exist many years without determining any deterioration of the general health, but unless removed it will ultimately prove fatal. If the breast is amputated early, the prognosis is more favorable.

### **FRAMBOESIA.**

Frambœsia, or yaws, is a disease hardly ever found outside the tropics. The malady usually attacks the negro races, whites being generally exempt. The incubation



period usually occupies a period of from three to ten weeks, being followed by two, or sometimes three, more or less well-defined stages. The initial lesion is a superficial ulceration without induration which most often occurs on the lips, breast or genitals. This ulcer heals in two or three weeks, and after a variable period of fever and systemic disturbance is followed in about a month by a general eruption of red macules. Most of these soon fade, but here and there one goes on to the formation of a conical papule. It is from these papules that the characteristic lesions of frambæsia develop. After a week the apex of the papule turns yellow, and gradually the papule develops into a nodule with thick, yellow, dome-shaped crust, the nodule being about a quarter inch in diameter. If the crust is removed, a mass of red granulation tissue covered with a white acid secretion is seen, somewhat resembling a raspberry. It is from this appearance that the disease takes its name. In the course of the next month the lesions shrink into brown crusts, which fall, leaving in dark races a pigmented macule. The number of the lesions varies from one or two to hundreds. In unhealthy persons the nodules may break down into deep ulcers. The disease may pass into what is termed the tertiary period, in which gumma-like lesions, ulceration of the pharynx and nares, chronic periostitis, anæmia, etc., are present.

The disease is rarely fatal if properly treated, and it is often noticeable that, though the lesions are severe, there is little disturbance of the general health.

Frambæsia is contagious, being inoculable, flies sometimes acting as the carriers of contagion. The malady is due to a specific virus, though no micro-organism has yet been proved to be the cause of the disease. Children are more frequently attacked than adults, and the disorder is rare after the thirty-fifth year. There are many who contend that frambæsia is only syphilis somewhat modified. All admit that there are many analogies.

In the treatment of frambæsia tonics and a nutritious



diet, in conjunction with cleanliness, are of prime importance. Many authorities are in favor of the administration of mercury as a curative agent, but all agree that it is to be used with caution. The various ulcers and sores which may form are to be treated by washing with antiseptic lotions and dressing with iodoform or similar preparations.

### FURUNCULUS ORIENTALIS.<sup>1</sup>

This affection, variously known as Aleppo button, Delhi boil, Biskra button, etc., is endemic in certain oriental countries. As in many skin affections that occur in tropical regions, there is much confusion as to its real nature. Geber, who made some investigations of the disorder, came to the conclusion that it was made up of a number of different diseases, being in one instance lupus, in another syphilis, etc. The majority of competent observers regard it as an independent affection, although with an obscure etiology. It is a local malady, which attacks mostly the face and exposed regions of the body. The lesion on the skin begins as a papule, which gradually enlarges to form a boggy, glossy and adherent tumor. This growth finally breaks down, and an ulcer results, which is covered by a scab, and when resolution finally takes place, there is seen a puckered, pigmented and disfiguring scar. The usual size of a button is about an inch in diameter, and there may be one or more lesions present.

The duration of the disorder is usually a year; sometimes it occupies a much shorter period, or it may be much longer in existence. Recurrences are exceptional. The affection is probably of parasitic origin.

A mere reference will suffice for a number of other disorders of the skin, usually considered in this place, which occur for the most part in tropical countries, such, for example, as Tropical Ulcer, Brother Ulcer, Parangi and the Verruga Peruana, occurring in the Peruvian Andes.

<sup>1</sup> Altounyan has a good article on the disease in Jour. Cutan. and Ven. Dis., June, 1885, from which this account is taken.



## CLASS VI.—NEUROSES.

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### **HYPERÆSTHESIA.**

AN exalted sensibility of the skin, unattended by objective structural alterations, is of frequent occurrence in various functional or organic diseases of the nervous system. It is especially prone to occur in the hysterical state. At times it is apparently idiopathic. There are some persons in whom a cold bath produces the most violent sensations of pain and burning, even without any apparent alterations in the color of the skin.

### **DERMATALGIA.**

The skin is at times the seat of a more or less superficial pain of a rheumatic or neuralgic character, which may be associated with marked hyperæsthesia, although not always. Both the character and degree of pain varies considerably, and it may be intermittent in its attacks or constantly present. There are no visible alterations in the texture of the skin. The disorder may be general, but it is more apt to affect local regions, such as the scalp, palms and soles, the spinal region, etc.

Dermatalgia is rarely idiopathic, but is usually associated with some internal disorder, *e. g.*, malaria, rheumatism, syphilis or affections of the nervous system, and it is by no means infrequent with uterine affections.

The treatment consists when practicable of the removal of the cause back of the dermatalgia, that is, of the rheumatism, malaria, etc. Locally, various rubefacients, warmth, galvanism, and even blistering may be tried. Menthol in the strength of two drachms to the ounce of vaseline often affords temporary relief, and so does a chloral camphor ointment.



PRURITUS.<sup>1</sup>

Pruritus is a functional affection of the skin in which the subjective sensation of itching, or some modification thereof, is the only direct symptom, any secondary changes or structural alterations that may occur being the result of traumatism.

In this sense pruritus is an idiopathic disease, and differs from the pruritus or itching that attends eczema, scabies, etc. Moreover, as explained on another page, pruritus should not be confounded with prurigo (q. v.), although in former years all manner of pruritic conditions were placed together under this latter title. Since in pruritus proper not only itching but various other allied abnormal states are included under the same designation, it would perhaps be better to call this affection paræsthesia as being more definitive; but as it was only after much difficulty that the word in its present acceptation was received, it is well to allow it to stand.

The symptoms experienced by persons suffering from pruritus are very various. Sometimes there is only slight itching of an intermittent character, or the distress may be almost continuous and of so furious a nature as to be uncontrollable. On the other hand, itching in the ordinary sense of the term may be absent, and the patient will complain of sensations of crawling or creeping, as if insects were present on the skin, or of burning, tingling or some modification of these, or of all combined; in fact the condition of perverted cutaneous innervation which constitutes the disorder will give rise to an endless variety of feelings impossible to catalogue or describe. In nearly all instances the pruritus is worse at night, and thus, tormented by day, and robbed of sleep by night, the state of the sufferer is rendered pitiable to the extreme, and in aggravated cases suicide or insanity may be the final outcome. According to the degree of itching will be the effects upon the skin of the attempts to relieve it. At

<sup>1</sup> See admirable discussion of this subject by E. B. Bronson in *Med. Record*, Oct. 18, 1890, and in *Morrow's System Dermatology*, p. 725.



times the secondary changes will be marked, and the integument will exhibit scratch marks, papules, pustules, and varying depths of pigmentation.<sup>1</sup> Again, there will be little or no evidence of traumatism, the suffering often being more mental than physical. Indeed, complaint of abnormal sensations in the skin is frequently a sign of mental aberration, and every physician will recall patients with the fixed and ineradicable hallucination that they were the hosts of ants, bugs and all manner of creeping, crawling and biting creatures. The desire to scratch is irresistible, and patients in efforts to gratify the passion will not only use the nails until they are worn away, but will employ flesh brushes, sticks, corn cobs, and even sand paper. After a paroxysm of scratching the nervous exhaustion is often extreme.

Since the whole of the cutaneous surface may be more

<sup>1</sup> According to Leloir there exist certain pruriginous affections which never exhibit any secondary changes in the skin ; but there are others, on the contrary, that may be followed by tegumentary alterations—it is to this latter condition that Brocq has given the names neurodermia and neurodermatitis. Through constant scratching and its results a state of “lichenification” of the skin is set up. The skin, infiltrated slowly by the embryonal elements, is thickened and becomes hard and rough, the papillæ become hypertrophied and group themselves after the manner of quite irregular and unequal papules. After a time, the skin presents an appearance specially characterized by an exaggeration of its natural folds, which form a quadrangular marking, with more or less wide and regular meshes, and by varying degrees of infiltration and consequent loss of normal consistence and suppleness (Jacquet).

In addition to this primary or pure lichenification Brocq erects a second group of lichenifications, consecutive to scratching, which develops upon preceding cutaneous lesions ; but it is necessary that the primary cutaneous affection be of a pruriginous character, that it occupy the same region for a sufficiently long time, and that the patient be predisposed to lichenification. For the primary form Jacquet and Brocq have selected the title “*névrodermite chronique circonscrite* ;” and for a diffuse type of the same condition the title “*névrodermites diffuses*.”

Touton, in agreement with the French observers, states that eczematization and pustulation may occur as a complication to the “*névrodermites*.” This so-called lichenification as met with in the course of chronic localized eczema is a matter of everyday observation, but as the result of a primary local pruritus the condition is worthy of more extended study.



or less involved in the pruritus, and at other times the disorder is strictly confined to certain defined regions, it is customary to speak of the disease as being universal or local.

### Pruritus Universalis.

It is rare for pruritus to be absolutely general; it is more apt to be limited to certain tolerably extensive tracts, or in turn invade one part after another. The general form may occur at any time of life, and be dependent on a great variety of etiological factors, but most cases of this sort are to be found in the aged, in whom the affection is most severe and intractable.

### Pruritus Localis.

In the local varieties of the disease certain special regions of the body may be the only parts attacked, the disorder being localized and showing no tendency to extend. In this way the itching may be present on the face, the eyelids, between the fingers, over the backs of the hands, or affecting certain fairly outlined areas. *Pruritus ani* is perhaps the most common of the localized forms. It is met with at all times of life and in both sexes. The itching is generally very severe, particularly at night, and the scratching produces excoriations, artificial eczema, cicatrices and dense infiltration. The itching sensations may be external, or extend to the mucous membrane. *Pruritus scroti* is often associated with that about the anal region, extending along the raphé of the perineum. Here, as elsewhere, all grades of itching may be present, as well as the degree of secondary change induced by the scratching. In bad cases the suffering is intense. *Pruritus vulvæ* or *pudendorum* is frequent, affecting the labia and clitoris, and producing eczema, vaginitis, great heat and swelling of the parts, and sometimes inducing nymphomania.

### Pruritus Hiemalis

Is that form of itching of the skin to which Duhring first called attention, and which is influenced in its develop-



ment by atmospheric conditions. The pruritus is usually established with the first change of the weather in the autumn, and with varying degree of intensity dependent upon the variations in the atmosphere will persist till the warm season has begun. Like all other forms of the disease, the itching is worse at night. The pruritus is rarely, if ever, universal, being confined mostly to the inner surface of the thighs and lower limbs. Duhring says that it occurs in both sexes equally, at all ages after puberty, and is uninfluenced by the state of the general health. Once established, the affection is apt to recur every winter. I have patients under my care in whom the pruritus has thus reappeared at the first spell of cold weather for many years. On the other hand, for some unknown reason, this susceptibility may diminish or altogether disappear.

In order to treat pruritus successfully its etiology must be well understood. Pruritus in the aged is usually due to senile degenerations of the skin. Among the causes of pruritus as commonly encountered may be mentioned functional and organic diseases of the liver, dyspepsia, Bright's disease, constipation, etc. Certain drugs and articles of diet also induce pruritus; among the former opium and its preparations are to be especially mentioned, and among the latter oatmeal and the inordinate drinking of tea.

A long list of sexual derangements may also be referred to, and the pruritus of pregnancy is a matter of common observation. Various disorders of the nervous system are complicated by itching of the skin, and the influence of abnormal mental states is well recognized.

Pruritus ani in many cases is associated with hæmorrhoids, and in children the same difficulty, as well as vaginal pruritus, is due to the presence of intestinal worms. Pruritus vulvæ in women is often caused by uterine disease, leucorrhœa and vaginismus, although it may be apparently idiopathic. The possibility that an intractable vaginal pruritus may be one of the earliest symptoms of uterine cancer should always be borne in



mind. It is also well in persistent local pruritus to examine the urine for sugar.

DIAGNOSIS. It is always a matter of much importance to know whether pruritus is primary, so to speak, or whether it is secondary to certain other affections. For example, excessive itching of the skin is associated with eczema, scabies, pediculosis, urticaria and a number of other disorders; but all of these exhibit well-marked symptoms, whereas in pruritus, aside from alterations in the skin due to scratching, the itching is the only direct manifestation of the disorder. In pediculosis the character of the scratch marks, their location about the neck and loins; in scabies the furrows, the multiform lesions, and their characteristic preference for the sides of the fingers, buttocks, genitals and breasts of women; in eczema the preëxisting eruption; and in urticaria the evanescent wheals should all be considered in establishing the diagnosis. In the local forms of pruritus it is necessary to ascertain the causes of the itching, whether hæmorrhoids, worms, etc., in fact in all forms of the disease the general is more important than the local diagnosis.

TREATMENT. The general treatment of pruritus consists for the most part in the use of measures for the cure or relief of exciting or complicating disorders. In this way every part of the system should be interrogated, and pains should be taken to correct any organic or functional disorder that may be present. Particular attention should be directed to the state of the stomach, bowels, kidneys and liver. The diet is often at fault, or sometimes it will be found that certain articles like oatmeal or tea are responsible for the itching. Tobacco undoubtedly keeps up and aggravates anal pruritus. There are several remedies that, given internally, have some reputation as antipruritics. Among those may be mentioned carbolic acid (one or two minims three times a day), wine of antimony (five to seven drops after meals), tincture of cannabis indica (ten minims gradually increased to thirty, three times a day), quinine (ten grains at bedtime), tincture of gelsem-



ium (ten minims every half hour till one drachm has been given, or toxic effects are experienced) and pilocarpine (one-eighth grain hypodermically). Salicylate of sodium and salicylate of strontium often act well. Valerianate of ammonium, the bromides, chloral and other hypnotics are useful at times. De Wannemacker has given salophen in doses of sixty to seventy-five grains a day with encouraging results. Savill advises calcium chloride both in primary and secondary forms of pruritus. It may be given well diluted in twenty, thirty or even forty grain doses three times a day. The diet should be regulated, the bowels kept open, and the remedy persevered with for several weeks after a cure has been effected.

The local treatment of pruritus comprises a vast array of remedies. For general pruritus may be employed baths, electricity, lotions and ointments.

A warm bath composed of eight ounces of bicarbonate of sodium, to which has been added bran liquor made by infusing several pounds of bran, is soothing and agreeable. After the skin has been gently dried, it may be anointed with carbolated vaseline, five or ten minims to the ounce. Mercurial and sulphur baths may also be tried. At the St. Louis Hospital, Paris, pruritus senilis is treated by hot starch baths at night, followed by sponging with a mixture of carbolic acid, one part, to fifty of aromatic vinegar, dissolved in a bowl of hot water. Afterwards a powder of one part of salicylate of bismuth (or salicylic acid) to nine parts of starch is gently rubbed in with the hand.

I have made much use of electricity in its various modes of application, namely galvanism, general faradization, etc., without much more than temporary results; however, the mental effect is good, a fact which explains a good part of electrical therapeutics. It is but just to add, however, that Polotebnoff claims good results with brush or pad electrodes (faradization).

Powders of many sorts have been recommended.

Anderson's antipruritic powder is well known.



R.	Pulv. amyli,	℥vj.
	Zinci oxidi,	℥jss.
	Pulv. camphoræ,	℥ss. M.

Leloir gives a list of powders that he has found useful.

R.	Acidi salicylici,	gr. xv.
	Zinci oxidi,	℥j.
	Pulv. amyli,	℥ij. M.

R.	Boracis,	℥ss.
	Talci,	℥ijss.
	Zinci oxidi,	℥j.
	Rice starch,	℥ij. M.

Lotions of various kinds are much recommended, composed of carbolic acid, thymol, liq. carbonis detergens, liq. picis alkalinus, benzoic acid, etc.

Carbolic acid is probably the most valuable of all the remedies used in pruritus and employed in the form of a spray, with a hand ball atomizer, after the manner originally suggested by me <sup>1</sup> its efficacy is considerably increased, besides being more cleanly and more conveniently applied. I generally prescribe the following lotion :

R.	Acidi carbolicæ,	℥iij-iv.
	Glycerini,	℥j.
	Aquæ,	q. s. ad Oj. M.
S.	Use as a spray.	

To increase the antipruritic effect it is a good plan to add five to ten minims of the oil of peppermint to each atomizerful of the lotion. This must be well shaken just before being used. In cold weather the atomizer may be placed in a vessel of hot water. Any substance that is "sprayable" may be thus utilized, such as liq. carbonis detergens, etc. The spray may be used as often as desired.

Among other valuable lotions may be mentioned the following :

<sup>1</sup> Jour. Cutan. and Ven. Dis., April, 1885.



- R. Fol. belladonnæ,  
 Fol. hyoscyami, āā ʒij.  
 Fol. aconiti, ʒss.  
 Acidi acetici, ʒj. M.  
 S. To be diluted with water, a drachm to the ounce.  
*Taylor.*

- R. Thymol., ʒij.  
 Liq. potassæ, ʒj.  
 Glycerini, ʒiij.  
 Aquæ, ʒviij. M.  
 S. Local use. *Crocker.*

- R. Acidi carbolici, ʒij.  
 Potass. causticæ, ʒj.  
 Aquæ, ʒiv. M.  
 S. Local use. To be diluted if too irritating. *Bulkley.*

- R. Menthol., gr. ij-x.  
 Aquæ, ʒj. M.  
 S. Local use.

- R. Boracis, ʒij.  
 Glycerini, ʒj.  
 Spt. camphoræ, ʒss.  
 Aquæ rosæ, ʒvjss. M.  
 S. Local use. *Duhring.*

- R. Liq. carbonis detergentis, ʒj.  
 Zinci oxidi, ʒss.  
 Pulv. calaminæ præp., ʒiv.  
 Glycerini, ʒj.  
 Liq. calcis, ʒvij. M.  
 S. Shake. Apply freely.

This is a very satisfactory combination in many cases. Carbolic acid may be substituted for the tar preparation in the same proportion. Menthol combined in either of the following ways will be successful in many cases.

- R. Menthol., ʒij.  
 Acidi carbolici, ʒss.  
 Glycerini,  
 Alcoholis, āā ʒj.  
 Aquæ, q. s. ad ʒvj. M.



R.	Menthol.,	3ij.
	Alcoholis,	q. s.
	Acidi carbolici,	℥xx.
	Lotionis zinci oxidi comp.,	3iv. M.

Bronson's lotion is very valuable.

R.	Acidi carbolici,	3j-ij.
	Liq. potassæ,	3j.
	Olei lini,	3j. M.

A number of years ago <sup>1</sup> I called attention to the value of the local application of cider vinegar, followed by citrine ointment, a plan of treatment quoted by Watson in his classical work.

Bowling advises that the parts be sponged twice a day with the vinegar, and that the citrine ointment should be smeared over the surface after the former has dried. Too large a region should not be subjected to this treatment at one time.

Ointments of sulphur, tar or of the two combined (one drachm of each to the ounce) are valuable. Bulkley's chloral and camphor salve is also of service.

R.	Chloralis,	
	Camphoræ,	āā 3ss-j.
	Ung. aq. rosæ,	3j. M.
S.	Local use.	

The use of a hot bath with green soap, followed by sulphur salve inunctions, is sometimes efficient, even where there is no suspicion of scabies in the case. Ointments, as a rule, are of more benefit in local forms of pruritus.

Good results are often obtained from menthol in salve form.

R.	Menthol.,	3ij.
	Olei amygdal. dulcis,	3ij.
	Lanolini,	3vj. M.

In the treatment of the strictly local forms of pruritus it is also necessary to seek diligently for the exciting or

<sup>1</sup>St. Louis Clinical Record, Dec., 1874.



complicating causes of the disorder, and, if possible, remove them. The local remedies are very numerous, but in addition to those already mentioned, I shall give only such as have proved useful in my own hands, or are recommended by competent authorities.

### Pruritus Scroti.

In most cases a well fitting suspensory bandage is of decided benefit. Sometimes, when the pruritus is accompanied by considerable sweating, a dusting powder of thymol and oleate of zinc (℞. Thymol., gr. j; pulv. zinci oleatis, ʒj. M.) is demanded. Bulkley's method with tar salve and hot water (see eczema of the scrotum) often does equally good service in pruritus of this region. The same author's camphor and chloral mixture may also be tried. The mercurial preparations are to be highly recommended, especially the white precipitate (℞. Hydrargyri ammoniati, gr. xx; adipis benzoati, ʒj. M.). Calomel in the strength of one-half to one drachm to the ounce may be prescribed in place of the ammoniated mercury. The vinegar applications followed by citrine ointment are often curative. The yellow and black washes are occasionally prescribed. Liveing's perchloride of mercury lotion (℞. Hydrargyri bichloridi, gr. ij–iv; acidi hydrocyanici diluti, ʒj; emuls. amygdalæ, ʒviij. M.) may be employed when the skin is unbroken. Carbolic acid lotions and ointments are as valuable here as elsewhere. Pencillings with the nitrate of silver solution (℞. Argenti nitratis, gr. xvj; spiritus ætheris nitrosi, ʒj. M.) are sometimes surprisingly beneficial. In intractable cases Vidal makes multiple scarifications with the scarificator of B. Squire.

### Pruritus Ani.

Carbolic acid gr. xv–xl to an ounce of oil of sweet almonds is highly spoken of by Duhring. The various tar and mercurial preparations, and particularly the latter, at one time or another give relief. A bismuth and morphia salve (℞. Bismuthi nitratis, ʒj; morphiæ hydrochlora-



tis, gr. ij; ung. aquæ rosæ, ʒj. M.) is said by Liveing to be especially valuable. Balsam of Peru of the strength of a drachm and a-half to the ounce of simple ointment is occasionally helpful. The compound gall ointment of the pharmacopœia has been much employed, and is especially useful if hæmorrhoids are present. Lassar's paste (see eczema) kept thinly smeared over the parts night and day, is an excellent remedy. Suppositories of cocaine or belladonna give temporary relief. Pencilling the part with the nitrate of silver solution mentioned above is to be recommended, particularly when cracks and fissures exist. The hot water and tar treatment already referred to gives perhaps more immediate relief than any other method at our command.

### Pruritus Vulvæ.

When the parts are hot and swollen from excessive scratching, great relief may be obtained by the use of very hot water followed by tar ointment and cold cream (R. ung. picis liq., ʒij; ung. aq. rosæ, ʒvj. M.) or the ung. vaselini plumbicum spread on lint. A ten per cent. solution of cocaine will give temporary relief. Schwimmer recommends an ointment of alumina (R. Alumin. hydrat., ʒjss, glycerini, olei olivæ, āā ʒv; ung. mollis, ʒx. M.). Goodell relies on an infusion of tobacco, of the strength of two drachms of the leaf to the pint.

Saturated solution of boracic acid is thought well of by some physicians. Reeve directs that the parts be painted every night with the compound tincture of benzoin (B. P.). Robinson says that an ethereal solution of iodoform in spray, or an iodoform ointment, is occasionally useful. The solution of silver in nitrous ether (gr. xvj-ʒj) often does well. The carbolic acid spray with oil of peppermint referred to above may also be advised. Routh recommends that a teaspoonful of borax be put in a pint bottle of hot water, to which is added five drops of oil of peppermint, with which, after thorough shaking, the parts are to be freely mopped with a soft sponge.



In all forms of pruritus about the genital and anal regions scrupulous cleanliness is required, and when practicable the surfaces should be kept apart by the interposition of lint or absorbent cotton.

PROGNOSIS. It may be said that generalized pruritus admits of a better prognosis than the local forms; however, senile pruritus and the pruritus dependent upon incurable organic diseases offer notable exceptions to this rule. All the local varieties of the disorder are more or less intractable, and the physician should be guarded in the expression of his opinion as to their curability. Putting aside, however, cases obviously the result of irremovable causes, *e. g.*, genital pruritus due to pelvic tumors, general pruritus from cancer of the liver, etc., it will be found that a satisfactory outcome may often be obtained if the patient is willing to follow implicitly the instructions given him.

### ANÆSTHESIA.

Anæsthetic conditions of the skin are mostly associated with various disorders of the nervous system, central or peripheral. Anæsthesia is also a common symptom in nerve leprosy. The loss of the sense of pain in syphilitics, especially women, is well known. A favorite site of this manifestation is the back of the hands. Taylor states that this analgesia is often combined with the absence of the sense of touch and temperature. In other conditions a painful hyperæsthesia may be associated with tactile anæsthesia. In the state called "painful anæsthesia" patients often experience sharp pain on the surface of those portions of the body that are totally void of sensation. This variety of anæsthesia, according to Leloir, is observed frequently in facial zona, leprosy, Morvan's disease and the different cutaneous trophoneuroses. This same authority points out that anæsthesia is usually not present in diseases of the skin of non-nervous origin, but it is the rule to find it, more or less pronounced, in all dermato-neuroses.







## CLASS VII.—DISEASES OF THE APPENDAGES OF THE SKIN.

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### FUNCTIONAL DISEASES OF THE SWEAT GLANDS.

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#### HYPERIDROSIS.

HYPERIDROSIS is a functional disorder of the sweat glands in which the secretion is produced in excess. This abnormal condition may be general or partial, acute or chronic; it may but slightly exceed the natural perspiration, or, on the other hand, be given off in large amounts. The general forms are mostly symptomatic, occurring in connection with phthisis and other conditions of debility, or in the course of various acute febrile states.

Very fat people, and those much given to stimulants, also suffer from general sweating of the surface. Hyperidrosis affecting one side of the body or one limb sometimes occurs.

The local forms of the disease are those that especially concern the dermatologist. In most cases the affection is found upon the palms of the hands, axillæ, the inguinal region and the soles of the feet. In these regions, as elsewhere, the amount of the secretion may be great or little. When the palms or soles are involved the parts may merely feel cold and clammy, or else warm and moist. Sometimes the secretion appears in small drops, or it may pour from them as freely as if the members had been dipped into a basin of water. I believe this very free discharge is oftener seen on the palms than on the soles. Excessive sweating may give rise to intertrigo or eczema in certain situations, *e. g.*, about the genitals and between



folds of the skin. Many persons who sweat profusely about the scalp suffer later from alopecia. On the feet especially perspiration is apt to have a disgusting odor (bromidrosis), and the skin has a sodden, macerated appearance. The disorder may be temporary, or it may continue for an indefinite period. It is generally worse in summer.

Persons of all ages, of both sexes, the rich and the poor, the cleanly and the dirty are subject to this affection. The cause or causes are obscure, but probably in most cases there is some fault in the nervous system. Crocker states that slight hyperidrosis of the palms may be congenital and occasionally hereditary. Buzzi believes that the excessive sweating of fat persons is due to a passive hyperæmia, arising from an obstruction in the venous blood caused by the pressure of the subcutaneous fat, and not by the increased exertion necessary in stout people. Cutler regards hyperidrosis as a functional affection of the sympathetic system.<sup>1</sup>

TREATMENT. In all cases it is well to treat obvious deviations from health. The treatment of the night sweats of phthisis, etc., need not be gone into here. Often enough no special indication can be determined, and then it is necessary to try the effect of the so-called specifics. Among these may be mentioned belladonna, atropia, agaricin and ergot. In my experience their effect is only temporary at best; besides, in the case of belladonna and its alkaloid, putting the patient to considerable inconvenience. Krahn prescribes twenty drops tincture of salvia (sage) in the morning and twenty to forty drops at bedtime. It must be continued for several weeks. Camphoric acid is highly recommended in various forms of sweating by a number of writers. Crocker says that the best remedy is a level teaspoonful of precipitated sulphur, in milk, twice a day. If it proves too laxative it may be combined as follows, and given in the same dose:

<sup>1</sup> Jour. Cutan. and Ven. Dis., Feb., 1888.



R.	Pulv. cretæ comp.,	3vj.
	Pulv. cinnamomi comp.,	3ij.
	Sulphuris præcipitati,	3j. M.

The local applications are numberless.

Fox recommends a one per cent. solution of quinine in alcohol; Crocker a belladonna ointment or liniment; Rohé a prescription containing eight grains of tannin to four ounces of bay rum, followed by a dusting powder consisting of starch, combined with oxide of zinc, boracic acid or salicylic acid. I have found a solution of salicylic acid in alcohol (5j–3iv) to do good; also a saturated solution of boracic acid. The application of very hot water is temporarily beneficial.

For the local sweating of the feet no plan of treatment gives such general satisfaction as the method originally suggested by Hebra.<sup>1</sup> The diachylon ointment or the ung. vaselini plumbicum is spread over a piece of linen about a foot square. The part having been first washed, and well dried, is then enveloped in this application, the toes at the same time being kept apart by pledgets of lint smeared over with the salve. Care must be taken that the foot be completely covered, and that the dressing is accurately in contact with the skin. After the completion of the operation a clean stocking is put on, and over all a light, new, low-quartered shoe. In twelve hours the dressing should be removed, the foot rubbed with a dry cloth, or a dusting powder applied to it.

This procedure is gone through with twice a day for from eight to twelve days. *In the meantime the parts must not be washed.* At the end of this period the dressings may be removed permanently, and the use of the dusting powder continued for some while longer.

After a few days the thickened cuticle peels off, leaving the surface covered with a clean, white skin. When the foot has become normal it may be washed, but the dusting powder should still be rubbed in for a while longer.

<sup>1</sup> Dis. of the Skin, Vol. I., p. 89, Sydenham Soc. Trans., 1866.



Sometimes the cure is permanent, but in other cases a repetition of the process is required.

Thin recommends for this condition dusting the shoes and stockings with boracic acid, the wearing of cork soles which have been dipped into a solution of boracic acid, and a boracic acid ointment. Morrow speaks well of foot baths of *pinus canadensis*, afterwards dusting with boracic or salicylic acid mixed with lycopodium. Simply strapping evenly and carefully with soap or lead plaster often suffices. Noebe advises that a ten per cent. solution nitrate of silver be painted on the sole of the foot and between the toes every day until the horny layer is shed.

Among other recent methods of treatment of hyperidrosis and bromidrosis may be mentioned the application of tannoform, which is a powder consisting of formalin and tannin. Under this treatment, according to Frank, the secretion speedily diminishes, and the smell in bromidrosis passes away. Frey recommends a two per cent. solution of formalin with which the soles and interdigital spaces should be washed twice a day; the same solution may be employed to wash out the inside of the shoes. Heusner advises the following wash: Balsam Peru, fifteen grains; formic acid, seventy-five grains; chloral, seventy-five grains; alcohol, one ounce. This may be applied to local areas by means of a cotton tampon, and for general sweating it may be used in a spray. In rebellious cases of local sweating the solution may be doubled and fifteen grains of trichloroacetic acid may be added to it.

PROGNOSIS. The prognosis should be guarded. Some cases recover more or less promptly, while others defy all treatment. Sweating of the feet would seem to be more amenable to remedies than a similar condition of the hands.

### ANIDROSIS.

Anidrosis, or deficiency of sweat, is often a symptom in general diseases such as diabetes and Bright's disease, and also is found as a concomitant in varying degrees in certain skin affections, *e. g.*, ichthyosis, psoriasis, general ec-



zema, the atrophic patches of leprosy, scleroderma, morphaea, etc.; also in many tropho-neuroses and after injuries to nerves. The perspiratory function in certain persons seems in abeyance even under circumstances that would usually produce free sweating.

### BROMIDROSIS.

Bromidrosis, or more properly osmidrosis, is a functional disorder of the sweat glands in which the perspiratory fluid exhales a disagreeable or abnormal odor. The quantity of the sweat may not be increased. Bromidrosis, or stinking sweat, is most frequently of a local character, and may have its seat in the axillæ, about the genitals, perineum or feet. It is said by Thin to be due to a micro-organism called the bacterium fœtidum. A great variety of odors may be present in the sweat, fragrant or the reverse, and often connected with disorders of the nervous system. I recall the case of a man in good health who exhaled from his person the most delightful odor of violets, which was strong enough to render his surroundings fragrant for some distance. The treatment of bromidrosis is considered under hyperidrosis.

### CHROMIDROSIS

Is a disorder of the perspiratory glands in which the sweat assumes various shades of color, as blue, red or yellow.

The disease is most frequently observed on the lower eyelids, forehead, cheeks, abdomen and scrotum. Sometimes a fine brick-dust-like deposit is seen in connection with it, or, on the other hand, it occurs as a discoloration of the skin and even of the fine hairs. Not infrequently this affection is feigned by hysterics. The causes are obscure; some cases have been thought to be due to the presence of indican; in others bacteria have been demonstrated; while in still others the result of examinations was negative. In moist, warm parts of the body like the axillæ and genital regions red sweat has been observed, but it is now known to be due to micro-organisms found



in concretions on the hairs (lepothrix). Blue, green or red sweat is at times due to various substances that have been taken into the body, viz., green sweat in copper workers, blue sweat from the ingestion of protosulphate of iron, and pink sweat following the internal use of potassium iodide, etc.

Other conditions such as uridrosis, phosphorescent sweat and hæmatidrosis may be mentioned in this connection.

Hæmatidrosis or ephidrosis cruenta is in reality a hemorrhage from the sweat spores (see purpura). Most of the cases according to Pollitzer have been impostures, but there is no doubt of the reality of the phenomenon at times, particularly in hysterics.<sup>1</sup>

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## ORGANIC DISEASES OF THE SWEAT GLANDS.

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### HIDRADENITIS SUPPURATIVA.

This is a suppurative inflammation of a sweat gland resulting in its destruction and the production of a scar (Pollitzer).

Pollitzer<sup>2</sup> states that this disorder is the same as Barthélemy's acnitis. It was first described by Verneuil in 1864 and since that time by W. Dubreuilh and others. The lesions may be few or numerous, and the sites of predilection are the axillæ, anus, nipple, scrotum and labia majora, in which situations they are apt to occur singly, but on the face and neck and the surface of the body generally they appear in large numbers.

The eruption begins as deep, painless subcutaneous nodules, the overlying skin being freely movable and of normal color.

<sup>1</sup> See Hyde, Contribution to the Study of Bleeding Stigmata, Jour. Cutan. and Genito-urin. Dis., Dec., 1897.

<sup>2</sup> Jour. Cutan. and Genito-urin. Dis., Jan., 1892, and Morrow's System, p. 771.



In the course of some weeks the lesion enlarges to the size of a pea, the skin covering it becomes red and some pain is felt on pressure. If the tumor is punctured a few drops of pus may be secured, but if it is allowed to go on undisturbed the growth will suppurate and leave a pigmented spot that ultimately remains as a slightly depressed scar. Sometimes several neighboring nodules will coalesce and form flat, firm growths that discharge through a number of openings. The small tumors do not in all cases suppurate, but after a long time become absorbed. According to Pollitzer it is characteristic of the disease that there will be present at a given time red or yellowish elevations, discolored crusts, pigmented patches, depressed, round or oval scars and subcutaneous nodules. The exact etiology is unknown, but various influences such as uncleanliness, cold, irritating applications, lowered vitality, dyspepsia, etc., have been assigned as predisposing causes.

The treatment must be conducted on general principles, that is, the administration of tonics when required, the regulation of the bowels, etc. Locally the lesions should be incised early, and dressed antiseptically. Pollitzer recommends antiseptic baths, and the topical use of salicylic or sublimate lotions.

The disease runs a long and tedious course, but if uncomplicated a spontaneous cure may be expected in time.

### MILIARIA.

Miliaria, lichen tropicus or prickly heat, is an acute inflammatory disorder characterized by vesicles, papules, vesico-papules and sometimes pustules. As ordinarily encountered, the eruption is limited to the trunk, although it may exist elsewhere, and consists of minute, acuminate, bright red papules, to which the term prickly heat is popularly applied.

Sometimes the lesions are entirely vesicular, or again, and especially on the face, pustular, or a mixture of papules, vesico-papules and vesicles. The eruption comes out suddenly, usually coincidently with profuse sweating, and



in favorable cases generally subsides with slight desquamation in two or three days. The subjective symptoms consist of most annoying tingling, burning and pricking sensations. Various terms are used to indicate one or another clinical feature of the affection, viz., *miliaria vesiculosa*, *m. papulosa*, *m. rubra*, *m. alba*, etc. The pustular form, which is not uncommon in this region, is not usually described in the books. I have seen many examples of it during our hot summers. Furunculosis is not an infrequent sequela, especially in children. Eczema may also follow.

Great heat of any sort is the exciting cause and consequently, as would be expected, the disorder is most frequent in summer. Children are more subject to prickly heat than adults, and the obese are oftener attacked than the lean. It is especially prone to occur in the intemperate. Robinson states that the lesions are nearly always situated in the immediate area of the upper part of the excretory portion of a sweat gland.

**DIAGNOSIS.** Miliaria differs from *eczema papulosum* in the fact that the lesions of the latter are larger, have a longer duration, and are accompanied by greater pruritus; and from *eczema vesiculosum* in that the eczematous vesicles are more closely set, and rupture more speedily, giving rise to a characteristic discharge. The occasional pustular form of miliaria sometimes bears more or less resemblance to small-pox and the pustular syphilide. Sudamina are not inflammatory in character.

**TREATMENT.** As it is rarely possible to remove the immediate exciting cause, namely, the great heat, the patient should be put in as good a condition as practicable to withstand it. This may be accomplished by living on a diet that is mainly farinaceous, by abstaining from alcoholic stimulants, and by wearing suitable garments. Children especially are often cruelly swathed in flannels and other heavy clothing. In an acute, extensive eruption, in the adult, the citrate of potassium in the form of the granulated effervescent salt is agreeable and useful.



Tonics are sometimes demanded in relapsing cases ; in the majority, however, internal treatment is not required. Locally, the most speedy relief may be obtained from the zinc and calamine lotion.

R.	Acidi carbolici,	℥ xl.
	(vel liq. carbonis detergentis)	
	Lotionis zinci et calaminæ,	℥ iv. M.
S.	Mop on freely.	

Anderson's dusting powder is also beneficial.

R.	Pulv. amyli,	℥vj.
	Zinci oxidi,	℥jss.
	Pulv. camphoræ,	℥ss. M.
S.	Dusting powder.	

### SUDAMEN.

This is a non-inflammatory affection of the sweat glands in which small pin-point, or slightly larger, clear vesicles appear upon the skin. They have been compared not inaptly to dewdrops, and are usually observed upon the skin in great numbers, closely set, yet discrete, and possessing a pearly lustre. They are entirely without inflammatory hue, and are not surrounded by an areola. They do not become purulent, and the vesicle wall does not rupture, but their contents undergo absorption, and the lesion disappears with a branny desquamation. Sudamina are prone to attack the thin portions of the skin ; on the face the lesions are deeper-seated and more persistent.

Sudamina are observed in connection with conditions of general debility and in febrile disorders ; on the other hand, even in perfectly healthy persons, where there is excessive formation of sweat, the same disorder may be induced. Robinson affirms that the lesion always forms in the corneous layer, and does not consist of a dilated sweat duct, but is due to an escape of sweat from the duct into the surrounding tissues. The contents of the lesions is pure sweat.



DIAGNOSIS. The disease is to be differentiated from miliaria (q. v.) by the absence of all inflammatory symptoms. Varicella might also be considered in this connection.

TREATMENT. Removal of the exciting cause is the main indication for general treatment. Locally, the application of dusting powders of lycopodium and oxide of zinc, or of starch, are demanded.

### HIDROCYSTOMA.

This condition was first described by A. R. Robinson in 1884, but more fully some years afterwards.<sup>1</sup> Since that time a number of cases have been published. The following description is taken from Robinson's account of the disorder:<sup>2</sup>

The eruption occurs upon the lower part of the forehead, the orbital region, nose, cheeks, and often upon the upper and lower lips and the chin. In Jamieson's case the lesions were situated on the nose and right side of the forehead, temples and cheeks, which was the seat of a hyperidrosis, the left side being normally dry. The eruption has never been observed elsewhere on the body. When few lesions are present they are generally discrete; if, however, they are very numerous they may be more closely set. The individual elements appear as tense, shiny, clear vesicles that vary in size from a pin head to a pea, and are of a round, obtuse or ovoid form. They are deep-seated, and the smaller lesions resemble a boiled sago grain; the larger lesions present a "darkish blue" tint. When the contents dry up the lesions have a milium-like aspect.

Robinson has not been able to recognize the presence of an excretory sweat duct orifice over the central part of a vesicle. Neither the skin over the lesion nor any part of the affected region shows inflammatory symptoms; but if the lesion is large a little hyperæmia may be visible at the

<sup>1</sup> Jour. Cutan. and Ven. Dis., Aug., 1893.

<sup>2</sup> Morrow's System, Vol. III., p. 780.



periphery. The vesicle contents are clear and remain so, and unless accidentally ruptured the lesions dry up after an existence of one or more weeks. The skin of the involved area may be left in a normal state or else exhibit slight temporary pigmentation. Subjective symptoms are mostly absent, or there may be some degree of tension and smarting. Most of the patients are women in middle life who perspire easily, and who, like washerwomen, are exposed to much heat and moisture. The eruption is worse in summer than in winter. Robinson's microscopical examinations showed that the vesicles arose from dilatations of the excretory duct of the sweat gland at some part in its course within the corium. As proving that the dilatation is not purely passive there is present such a rapid proliferation of the epithelium lining the part of the duct affected that the entire cyst wall is lined by this epithelium. The contents of the vesicles are always, in the beginning at least, liquid, clear and slightly acid as in ordinary sweat.

**DIAGNOSIS.** This affection should be differentiated from eczema, dysidrosis and sudamina crystallina. It is only necessary to refer to sudamina in which the lesions are caused by a retention of sweat within the corneous layer and are consequently quite superficially seated; the other disorders need not give rise to any confusion in diagnosis if their main features be borne in mind.

**TREATMENT.** Avoidance of the known causes of the disease constitute the prophylactic treatment. The actual lesions may be punctured.

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## DISEASES OF THE SEBACEOUS GLANDS.

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### SEBORRHŒA.

Seborrhœa, sometimes also called acne sebacea and steatorrhœa, is a functional disease of the sebaceous glands characterized by excessive secretion of sebaceous matter,



which is deposited on the skin in the form of oily, scaly or crusted material.

Seborrhœa is one of the commonest of skin affections, but since in the majority of cases its presence occasions little or no inconvenience, the disorder comes less under medical observation than some other rarer skin diseases. Indeed, seborrhœa in the form of the vernix caseosa is physiological in newborn children; and even in later life the line between the normal and abnormal, just as in disorders of the sweat glands, is at times difficult to determine.

Seborrhœa is met with under two separate varieties, namely: *Seborrhœa oleosa* and *Seborrhœa sicca*.

When the secretion is fluid and oily, it is called *seborrhœa oleosa*, when dry and scaly, *seborrhœa sicca*, which is the more common; but both forms may coexist on the same patient, or the distinction between them may at times be not very marked. The disease may occur on all parts of the body where there are sebaceous glands; but the more usual sites are as follows:

#### Seborrhœa of the Scalp.

A certain amount of seborrhœa of the scalp may persist in newborn children, and the effort to remove it by washing, combing and other harsh measures is not an infrequent cause of eczema.

The oily form of seborrhœa is comparatively infrequent in the adult scalp, and it is said to be more apt to attack those with black hair. In these cases the hair is shiny and greasy to the touch and often matted together in tufts. Unless scrupulous cleanliness is observed the parts become very foul from collection of impurities, and an accompanying dermatitis may occur as a complication.

Usually seborrhœa in this locality is of the dry sort, or rather in the majority of cases is of the mixed variety—partly oily and partly dry. The sebaceous material dries on the scalp in thin, greasy, adherent scales about the openings of the hair follicles, or attached to the hair in



dry, powdery flakes, or heaped up in greasy masses more or less firmly adherent to the scalp. The underlying skin is generally pale or even ashen in color; but at times from scratching, pruritus often being present, the scalp may be reddened, or here and there will exhibit moist spots that readily crust over. Seborrhœa of the bearded face and eyebrows is also observed. A closely allied condition is that known as alopecia pityrodes (q. v.) or pityriasis capitis.

In seborrhœa the nutrition of the hair is interfered with, and baldness may ensue; but in my experience this result is by no means inevitable.

### Seborrhœa of the Face.

Seborrhœa, both in dry and oily forms, occurs on the face. A general unctuous condition of the face is common with a great many people, and an oily condition of the nose, which at the same time is of a bluish-red color to the eye and cold to the touch, is frequently seen in chlorotic and strumous young people, and very often as a result of squeezing and pinching the member becomes large and flabby. The region behind the ears, at the sides of the nose, and the corners of the mouth are common seats of seborrhœa.<sup>1</sup>

### Seborrhœa of the Body.

Under the term seborrhœa corporis Duhring describes a form of eruption which is comparable to the lichen circinatus of English writers, and represents most characteristically the seborrhœal eczema of Unna (q. v.). It is to be found especially over the sternum and between the shoulders and also on other parts of the body, except the face (Elliot). Oily seborrhœa is a common accompaniment according to Besnier. There is no sort of question that this form of the disease is preceded by a pityriasis of the scalp; in fact the disease always extends downwards.

<sup>1</sup> An excellent illustration of seborrhœa is given by Duhring in his *Atlas of Skin Diseases*, Plate I.



## Seborrhœa of the Genitals.

Seborrhœa of the glans penis, of the inner surface of the prepuce, and of the sulcus in the male, and of the labia and clitoris in the female is not uncommon. The secretion collects as a cheesy mass, and unless removed undergoes decomposition, which in turn may produce inflammatory symptoms, *e. g.*, balanitis, etc. Seborrhœa of the umbilicus, often leading to inflammatory conditions (seborrhœal eczema), is comparatively frequent.

Under the name of *ichthyosis sebacea* or *seborrhœa squamosa* of the *newborn*, Kaposi describes a condition, which, according to him, is represented by a greater amount of vernix caseosa, and which continues to be reproduced during the first few days after birth. It encrusts the skin and occasions tension and the formation of painful cracks and fissures. Unless relieved by inunctions and the use of artificial heat the infants succumb in a few days to inanition. Kaposi states that this condition is a true seborrhœa, and different from *ichthyosis fœtalis*. Two other forms of seborrhœa are also described by Kaposi: an adult *seborrhœa universalis* found mainly in the old or else in marasmic young people, in which fatty shining scales that constantly exfoliate, especially on the trunk and extensor sides of the limbs, are present; and, secondly, an *ichthyosis sebacea* in which the greater part of the integument, more particularly the trunk and extensor surfaces of the limbs, is covered with greenish-brown and blackish crusts that break up into plates and patches.

Among the causes usually ascribed for the production of seborrhœa are chlorosis, dyspepsia, wasting diseases and various disturbances of nutrition. The seborrhœic condition of the skin that follows small-pox, and that also becomes established in syphilis, is well known.

The statement that seborrhœa, especially of the scalp, is more common in women than in men does not agree with my own observations. The cause of seborrhœa in a fair proportion of cases is not apparent.



Sometimes there would appear to be an hereditary predisposition.

Notwithstanding the definition given of seborrhœa in the beginning of this section, it is a matter of dispute whether the sebaceous glands are alone responsible for the fatty secretion; in other words are not the sudoriparous glands also at least partly responsible? Elliot, who is mainly in accord with Unna on this subject, believes that both of the cutaneous glands act as generators of the fatty secretion, while admitting that the sebaceous glands are especially interested in seborrhœa. Unna, as is well known, denies the existence of a seborrhœa sicca, and Elliot acknowledges the seborrhœa oleosa of the Vienna school as the only representative of true seborrhœa, also excluding seborrhœa sicca, and both writers regard the latter as a parasitic catarrhal affection of the skin. Sabouraud admits no other form of seborrhœa than the oily, which he looks upon as due to a secretion poured out by the sebaceous glands. Seborrhœa sicca for him represents one of the secondary effects of oily seborrhœa along with acne, etc. A seborrhœal cocoon, lying in that part of the follicle situated between the opening of the sebaceous gland and the external orifice, and which contains a presumed specific bacillus, is considered the essential lesion of seborrhœa (see alopecia areata). L. Heitzmann<sup>1</sup> reaffirms the view that seborrhœa is a functional disturbance of the sebaceous glands, consisting of an enlargement of the glands with an increase of secretion. If inflammation occurs it is due to irritation.

**DIAGNOSIS.** Seborrhœa when occurring on the scalp should be distinguished from eczema and psoriasis in that region. In eczema the disease rarely involves the whole scalp, the skin is apt to be infiltrated, the itching is marked, and the scales are not greasy; in seborrhœa the skin is apt to be pale, the itching is slighter, the skin is not thickened, and the scales may be rolled into little balls. At times, however, the two diseases coexist.

<sup>1</sup> Am. Text-book of Genito-urin. Dis. and Dis. of the Skin.



In psoriasis the scales are not greasy and are piled up in mortar-like heaps, besides, as a rule, occupying only certain portions of the scalp; moreover, psoriasis in the majority of cases may be found at the same time on the elbows and knees.

Lupus erythematosus, at one time called seborrhœa congestiva, looks at times not unlike seborrhœa of the face; but the defined limit, the infiltration and scarring, and the violaceous tint of the first named affection are marked points of distinction. Lupus erythematosus is also often found simultaneously on the ears.

Seborrhœa of the body should be differentiated from eczema and psoriasis, from ringworm, and from pityriasis rosea (q. v.).

**TREATMENT.** In all cases of seborrhœa it is important to correct any derangements of the health that may be present, and to place the patient under the best hygienic conditions. To these ends the diet should be regulated, dyspepsia removed, and such other measures advised as the special necessities of the case may warrant. Iron is often indicated and may be given in the form of Blaud's pills with nux vomica, or as a wine of iron with Fowler's solution. Robust persons who may be suffering from a deranged digestion and constipation are often benefited by the *mistura ferri acida* of Startin. I have not seen any result from the administration of the sulphide of calcium. Elliot advises ichthyol internally, beginning with one five-grain capsule three times a day, and gradually increasing to five or more during the same period.

The local treatment is of much importance. It is first necessary to remove all crusts and scales, particularly from the scalp. This may be accomplished where the crusts are thick and tenacious by soaking the parts over night with olive oil under a flannel cap, and then washing freely next morning with equal parts of green soap and alcohol. At other times the simple washing with the soap spirit is sufficient. If the scalp, for example, is found somewhat tender at first, it will be best for a few days to apply a



little vaseline or almond oil ; usually, however, the selected medicament may be used at once. Of all the preparations that have been advised for seborrhœa, sulphur gives the speediest and most satisfactory results. I usually combine a small quantity of salicylic acid with it.

R.	Sulphuris præcipitati,	3j-ij.
	Acidi salicylici,	ʒj.
	Vaselini,	3j.
	Olei limonis,	q. s. M.

S. Apply a small quantity once or twice in the day.

If this or any other greasy application is used on the scalp, it will be necessary to direct the patient to employ the shampoo every four or five days or even oftener.<sup>1</sup>

For seborrhœa of the scalp Vidal suggests the following :

R.	Sulphuris præcipitati,	3ss.
	Olei ricini,	3ij.
	Olei theobromæ,	3iij.
	Balsam Peruv.,	3ss. M.

Mix the sulphur and castor oil thoroughly, then add the cocoa butter by aid of a gentle heat, and finally the balsam.

S. Rub into scalp morning and evening.

Bronson's pomade is also very serviceable in the same condition.

R.	Hydrargyri ammoniati,	ʒj.
	Hydrargyri chloridi mitis,	ʒij.
	Vaselini,	3j. M.

S. Apply once or twice daily.

Elliot particularly recommends resorcin, three to twenty per cent. strength, preferably in alcoholic solution.

Various other mercurial preparations, tar, tannin, chloral and carbolic acid have also been recommended.

According to Morrow,<sup>2</sup> for seborrhœa of the face, after

<sup>1</sup> When ordering the shampoo for the first time it is advisable to warn the patient that probably a great many loose hairs will come away, else the physician will be blamed for prescribing such strong remedies.

<sup>2</sup> Atlas of Venereal & Skin Dis., p. 135.



the crusts have been removed, the following is an excellent application :

R. Sulphuris præcipitati,  
Spiritus odorati,                      āā ʒss.  
Amyli mucilaginis,                      ʒiv. M.

S. To be applied at night, the following morning to be washed off, and the affected surfaces to be powdered with sulphur, 1 part, to Fuller's earth, 7 parts.

Oily seborrhœa of the nose is sometimes much improved by mopping with the zinc and sulphuret of potassium lotion.

R. Zinci sulphatis,                      ʒj.  
Potassæ sulphuratæ,                      ʒj.  
Aquæ rosæ,                      ʒiv. M.

S. Mop on freely for five or six minutes morning and evening.

Mopping the part with ether will remove the oiliness temporarily. A superfatted soap containing sulphur and salicylic acid is also useful. The following lotion is agreeable.

R. Acidi borici,                      ʒij.  
Alcoholis,                      ʒiv. M.

S. Mop on with rag several times daily or whenever the face is "shiny."

For seborrhœa of the trunk the same remedies may be used as in other localities, the sulphur and resorcin preparations giving, however, the best results. The following formula is useful :

R. Resorcini,                      gr. x-xx.  
Zinci oxidi,                      ʒss.  
Sulphuris præcipitati,                      ʒj.  
Vaselini,                      ʒj. M.

Seborrhœa of the genitals requires absolute cleanliness and the local use of an alum or tannin wash.

PROGNOSIS. Much may be done for seborrhœa of the scalp, especially as regards loss of hair, if the case is seen early. With modern methods of treatment the removal



of "dandruff" is not difficult, but relapses are frequent. The same may be said of seborrhœa elsewhere. The disease in infants is not difficult to manage, and genital seborrhœa is quite amenable to treatment.

### COMEDO.

This is a disorder of the sebaceous glands in which their excretory ducts are plugged up by hardened sebum mixed with epithelial cells. According to Unna comedones are not the result of an abnormal secretion of sebum, but a product of hyperkeratosis extending from the general surface to the mouths of the follicles, and which contain, in addition to horny substance, normal sebum. For Sabouraud the comedo is a huge, degenerated seborrhœic cocoon, and *acne polymorphe* is a further manifestation of this same degeneration. A little mite—the *acarus folliculorum*—is sometimes found in the expressed mass, but its presence is apparently of no etiological importance.

The accumulations are usually black-topped, looking like grains of gunpowder, and cause elevations of pin-point to pin-head size; sometimes there is slight depression. If the skin be compressed on both sides of one of these little papules a filiform, white or yellowish mass may be extruded, which is popularly supposed to be a flesh-worm, but which is merely the inspissated contents of the sebaceous follicle. According to Unna, the black heads of the sebaceous plugs are due to pigmented granules and not to accumulation of atmospheric dirt, as commonly supposed. I know that these black heads are commonly seen after the use of sulphur preparations. Cases of double comedo have been observed (Dumesnil). The usual situations of comedones are the nose, forehead, cheeks, chin, inside of ears, and also the chest and back. Comedones are present in all cases of acne. Subjective symptoms are absent. The affection is most frequent in persons having a coarse skin, and is due in most cases to disorders of digestion, and is also found in those suffering from various so-called strumous states. It is also common



in perfectly healthy people—especially women—who do not habitually use soap at the toilet.

Grouped comedones have been described by Thin and Crocker, which are said to occur mainly in the “flush area of the face, but also on the trunk.” They are smaller than the ordinary kind, more uniform, and do not suppurate. Crocker and others also report comedones as occurring in children; on the temples in girls, the occiput and forehead in boys and the cheeks in infants. Unna declares that the acne comedo differs from other comedones by the regular presence of sebum and acne bacilli.

**TREATMENT.** Attention to diet, general hygiene, etc., as in acne, are prerequisites to a successful issue. Locally, stimulating measures are to be advised, together with the expression of the sebaceous plugs. For the latter purpose a watch key or Piffard’s ingenious comedo spoon may be employed. The following lotion may be used every night:

R.	Saponis olivæ præp.,	
	Alcoholis,	āā ʒj.
	Aquæ rosæ,	ʒvij. M.
S.	Rub in with a piece of dampened flannel.	

If the face is made rough by these frictions, cold cream may be smeared on in the morning.

Unna recommends a paste of this sort:

R.	Aceti,	ʒij.
	Glycerini,	ʒiij.
	Kaolini,	ʒiv. M.
S.	Smear over surface at night.	

Permanent obliteration of the sacs may be obtained by inserting an electrolytic needle for a few seconds.

Preparations of sulphur I regard as objectionable, as this drug apparently seems to increase the number of black heads.

### MILIUM.

The usual definition of milium is a little subepidermic tumor caused by retention of secretion in a sebaceous



gland. Milia occur for the most part on the face, especially under the eyes, over the cheeks and on the forehead. They are of a whitish or yellowish color, and vary in size from a pin point to a pin head, and in numbers from two or three to dozens. When found upon the penis and scrotum they are much larger than elsewhere. They remain unchanged for years, but sometimes the contents undergo a calcareous degeneration, forming the so-called cutaneous calculi. It is not uncommon to find milia on the faces of newborn children (*strophulus albidus*), but it is to be noted that Phillipson regards these as sebaceous cysts. They are often seen in connection with acne, also on the sites of pemphigus bullæ, and in the wake of various ulcerative and atrophic conditions. Unna says that comedones and sebaceous cysts have usually been confounded with true milium, but that the latter is really a horny cyst. Crocker's cases are probably not true milia.

Milia may be mistaken for xanthoma when of a yellow color and seated upon the eyelids, and perhaps for molluscum epitheliale.

**TREATMENT.** They may be readily shelled out after a superficial incision, but by far the most ready method is, as originally advised by the writer, to puncture each little tumor with a fine needle attached to the negative pole of a galvanic battery.

### ATHEROMA.

An atheroma or sebaceous cyst is a cyst lined with epithelium, containing sebaceous-like matter. In size atheromata vary from a pea to an orange. They occur as round, sometimes slightly flattened, swellings that are elastic to the touch. The tumor usually slides freely over the underlying tissues, but the skin over it, though normal in appearance, is often adherent to the growth. Often at the apex of the cyst may be seen a black point, which represents an opening into the cavity of the tumor, through which a thick whitish mass, often with a fetid odor, may be squeezed. An atheroma after injury or spontaneously



may suppurate; after discharging its contents an ulcer covered with fungous granulations may be left which may closely resemble an epithelioma. At other times, after the rupture of the cyst, a cutaneous horn forms. In old cysts the contents undergo a calcareous change. Atheromata usually occur on those parts normally supplied with sebaceous glands, as the face, head, neck and back, but after wounds they have been observed in regions not supplied with sebaceous glands.

There is difference of opinion in regard to the pathology of sebaceous cysts, some contending that they are the result of occlusion of the ducts of sebaceous glands, with consequent accumulation of the secretions, while according to other authorities atheromata are in reality dermoids. It has been suggested that those cysts which follow wounds of parts where no sebaceous glands are normally found are due to epithelial structures implanted in the wound. It is more than likely that tumors of widely different characters have been grouped under the general designation of sebaceous cyst. According to Unna the atheromata proper are subcutaneous, indolent tumors, from the size of a pea to that of a walnut, semi-spherical, show no opening, and contain a gritty, odorless débris of horny cells. Most of them occur on the scalp. Closed or open cysts that have contents, fatty or smelling of fatty acids, are never atheromata. He states further that the absence of microorganisms separates them, together with the dermoids, from all follicular cysts.

If a patent duct exist through which the contents can be squeezed, no mistake in diagnosis is possible. When the duct is absent the tumor is most likely to be mistaken for a lipoma, but the position, the absence of lobulation and dimpling of the skin over the growth, as well as the fact that the tumor does not slide so readily away from the finger pressed at its edge, will mark the cyst. Cases have been reported where a soft subcutaneous malignant growth has been regarded as an atheroma, and a fungating atheroma with edges thickened by inflammation may



resemble an epithelioma; in both cases an appeal to the microscope would determine the diagnosis.

**TREATMENT.** In most cases the best treatment of atheroma is to divide the skin down to the wall of the cyst, and then to dissect out the sac, taking care not to rupture it. Another method is to split open the sac, and, seizing its thick lining membrane with forceps, to drag it from its attachments: by this method there is liability to recurrence, as some fragments of the secreting membrane may be left behind. Lutz of Honolulu speaks in high terms of the use of iodine to cause an obliterating inflammation. The tumor is split open, its contents evacuated, and the interior painted with tincture of iodine. This method is of especial application where the skin is so firmly adherent to the sac as to make it difficult to dissect it out.

### ACNE.

Acne is an inflammatory disease of the sebaceous glands, occurring mostly about the face and back, and characterized, according to the intensity of the process, by papular, pustular or tubercular lesions. It is rare to find an acne that is purely papular or purely pustular, although one or the other form of lesion may predominate. The eruption is most frequently to be found upon the face, shoulders, chest and back, but it may occur wherever there are sebaceous glands, affecting more particularly, however, those connected with rudimentary hairs. The most common seat of the disease is the face, to which region it may be entirely confined, or conjoined with more or less eruption elsewhere. In other instances the shoulders and back may be the only parts attacked. Acne is generally complicated with more or less comedo and seborrhœa. As a rule, it is a chronic affection, running its course slowly, and kept up by the appearance, from time to time, of new crops of papules or pustules. Subjective symptoms are not very marked. The number of acne lesions present in a given case may vary from two or three to several dozens.



For practical purposes it is well to recognize two clinical varieties of acne, viz., acne simplex and acne indurata.

### Acne Simplex

Is usually made up of papules, papulo-pustules and pustules. In some cases small red pimples predominate (acne papulosa), which are somewhat conical in shape, and present at their apices minute yellowish or blackish points corresponding to the ducts of the sebaceous glands. The more frequent variety of acne simplex, however, is the papulo-pustular with the pustules in excess (acne pustulosa). The pustules are freely dispersed over the invaded surface, have a somewhat globular shape, and are seated upon an inflamed base. They vary in size from a pin head to a split pea.

Suppuration may be abundant or slight; in acne simplex the evolution of the pustule is rapid; it may either rupture and discharge its contents, or undergo absorption and desiccation.

### Acne Indurata

Differs in no way pathologically from the common variety, except in the extent of the inflammatory process. In acne indurata the inflammation is deeper seated, and the subcutaneous connective tissue is apt to be involved, and there may be considerable swelling of the parts, and even quite large subcutaneous abscesses may form. The tubercles are usually slow in development and are indolent in their course; in fact, a hard inflamed nodule may exist many days before suppuration can be detected. Indelible cicatrices often result.

The so-called *acne artificialis* due to the ingestion or topical application of certain substances, *e. g.*, iodine, bromine, tar, etc., calls for no especial description. The eruptions thus caused may be slight or exceedingly severe. *Acne cachecticorum* or *scrofulosorum* occurs in the form of livid red, pin-head to lentil-sized, soft, flat papules and pustules (Kaposi) that are usually found on the extrem-



ities of ill-nourished, strumous persons. T. C. Fox<sup>1</sup> calls attention to an eruption of similar character in young children.

Acne of the ordinary type does not usually attack children. It is most common from the age of puberty up to the age of twenty-four or thereabouts, although it may occur in more mature years. Acne may persist for a lifetime, but the great majority of cases tend to spontaneous recovery, at various times, within the period stated above.

Next to eczema acne is one of the most frequent diseases of the skin; indeed if all persons affected with it were to seek the aid of a physician, there is no question that it would occupy the first place in our statistical tables. Acne is found under all conditions of life, in all climates, and in both sexes equally. Much difference of opinion exists among dermatologists as to the causes of acne. While some fail to find any especial or unequivocal cause or causes for it, others ascribe its existence to the influence of the most various conditions. It is quite true that the etiological factor is not always appreciable, but it is indisputable that most cases develop about the period of puberty, and secondly that we find menstrual and gastrointestinal derangements as frequent accompaniments of the disease. It is therefore reasonable to assume that these conditions stand in some causal relation to acne. There is no proof, beyond mere surmise, that excessive venery, any more than continence is responsible for the affection. The immediate cause of acne, according to Kaposi, is either an irritation due to inspissation of the glandular secretion, or, in other instances, there is a change in the chemical character of the secretion due to functional perversion. The presence of pus-cocci in the secretions of pustular acne is also well known, but it does not follow that they are the specific causes of the disease, since staphylococci are met with in many other diseases of the skin. Lomry is of opinion that Unna's special bacillus is a mild variety of the bacterium coli. Sabouraud's views as to the rela-

<sup>1</sup> Brit. Jour. Derm., Nov., 1895.



tion of oily seborrhœa to acne have already been mentioned.

**DIAGNOSIS.** Acne is to be recognized by its chronicity, its limitation to certain regions of the body, as the face, chest and back, the relapsing nature of the malady, the character of the lesions, and their correspondence to the sebaceous follicles. A papulo-pustular or tubercular syphilide may strongly simulate an acne, but the history, course and concomitants of the two diseases would be quite different, taken in connection with the more general diffusion of the earlier syphilide, and the tendency to ulceration exhibited by the later. Acne is frequently mistaken for small-pox, and occasionally *vice versa*; but a most casual acquaintance with the course and symptoms of variola would save from this error. Papular eczema and disseminated lupus nodules should also be carefully differentiated.

**TREATMENT.** Hygienic and dietetic measures are urgently demanded in most cases. Under the first head are to be recommended the tepid or cold sponge bath, followed by brisk friction of the skin, which should be taken every morning, and also one or more Turkish baths a week. Patients should be encouraged to take regular exercise, preferably in the form of a walk of a half-hour's duration, morning and evening, although in weakly persons this should be approached gradually, as undue fatigue is always objectionable. Well-ventilated apartments and early hours should be insisted upon. As many acne patients suffer from dyspepsia and constipation, it is better to overcome these states by judicious feeding and regular habits than by drugs, which only palliate and do not cure. Stimulating foods and drinks, such as soups, spices, gravies, pickles, cheese, wine, beer, spirits, tea and coffee should be prohibited. Oatmeal, hot and fresh breads and cakes, pastry and fried foods generally are particularly obnoxious. Sweets and all kinds of nuts are to be avoided. Patients should be encouraged to drink milk, where it agrees, and to eat broiled beefsteak, mutton-chop, roast beef, the white meat of fowls, well cooked and di-



gestible vegetables, especially those that do not contain too much saccharine or starchy matters, and to indulge in most fruits except bananas. If constipation is a prominent feature, order a large cup of hot water to be slowly sipped one hour before breakfast and on retiring at night. The addition of a half teaspoonful of Carlsbad salts to the hot water in the morning is very useful, even where there is no constipation. Only enough water should be drunk at meals to secure mastication of the food, and on no account should a meal be prefaced with a goblet of iced water. It is well to drink copiously of water between meals, and especially should a glassful be taken about two hours after a repast. An action of the bowels should be solicited at the same hour every day, and patients should be warned not to read while at stool. Gentle kneading of the bowel in the direction of the colon at this time is also to be advised.

It is needless to say that as regards *internal treatment* with drugs we have no specifics. The so-called blood-purifiers, such as sarsaparilla and iodide of potassium, are useless, and in the case of the latter positively injurious.

The treatment must necessarily be symptomatic. It should be our care to seek out all complications and remove them if possible. Dyspepsia and constipation are to be treated on general principles, if anything is required in addition to the dietetic and hygienic measures outlined above. Sometimes in plethoric subjects, when there is costiveness and a coated tongue and much local hyperæmia, the *Mistura ferri acida* serves a good purpose :

R.	Magnesii sulphatis,	℥j.
	Ferri sulphatis,	gr. iv.
	Sodii chloridi,	℥ss.
	Acidi sulphurici diluti,	℥ij.
	Infus. gentianæ,	q. s. ad ℥iv. M.

S. A tablespoonful in a goblet of water, half-hour before breakfast.

Another method of overcoming constipation is by the administration of a teaspoonful of common salt in a large



glass of water a half-hour before breakfast. In obstinate cases, especially to begin with, a nightly pill of aloin, strychnia and belladonna may be ordered. When the bowels are unusually sluggish the pills of iron and aloes (aqueous ext. aloes, one grain; and sulphate of iron, two grains), recommended by Spender, will be found valuable. One such pill should be taken three times a day at first, but afterwards the dose should be rapidly diminished until one every few nights will be found sufficient. Cascara sagrada and the rhamnus frangula are also of value. The routine administration of decided purgatives is, however, very bad practice, and so soon as the bowels have been properly opened, it is best to try to keep up the regularity by the simpler methods first mentioned. In the anæmic iron is indicated either in the form of the simple tincture, or after the following prescription:

R. Tr. ferri chloridi,  
 Acidi phosphorici diluti,                      āā ʒj.  
 Spt. limonis,    ʒss.  
 Glycerini,    ʒij. M.  
 S. Teaspoonful in water, one hour after meals.

The malt extracts and cod-liver oil are also suitable remedies in weakly young people, who have greasy skins, and suffer from cold hands and feet, or are of the so-called scrofulous habit.

An emulsion made in the following way is very eligible:

R. Olei morrhuæ,    ʒiv.  
 Pancreatini saccharati,    ʒj.  
 Pulv. acaciæ,    q. s.  
 Glyceriti hypophosphitis,  
 Syr. calcis lactophosphatis,  
 Aquæ,    āā ʒiv.  
 Olei gaultheriæ,    gtt. xxx. M.  
 S. Tablespoonful three times a day, after meals.

When the acne is accompanied by considerable hyperæmia and irritability of the skin, Taylor recommends that alkalies be given for periods of two or three months:



R. Potassii acetatis,  $\bar{3}j$ .  
 Sodii et potass. tart.,  $\bar{3}ij$ .  
 Syr. zingiberis,  $\bar{3}ij$ .  
 Aquæ, q. s. ad  $\bar{3}viii$ . M.

S. A tablespoonful in a wineglass of water after meals.

Bulkley speaks highly of the following mixture given in acne indurata :

R. Potassii acetatis,  $\bar{3}ss-j$ .  
 Tr. nucis vomicæ,  $\bar{3}ij$ .  
 Extracti rumicis fld.,  $\bar{3}iv$ . M.  
 S. Teaspoonful in water, half an hour before eating.

Where there is constipation the same authority recommends the addition of twenty or thirty drops of the fluid extract of cascara sagrada to each dose, and if there be menstrual disturbance a further addition of ten to twenty drops of the tincture of cypripedium.

In certain chronic cases minute doses of the bichloride of mercury (gr.  $\frac{1}{32}$ ) with tincture of cinchona bark may be tried.

Arsenic has been an almost routine prescription with many physicians in the treatment of acne. I have rarely seen it do much good ; in fact the majority of cases that come to the dermatologist have already had long courses of the drug. While it should never be administered in acute cases, there is no objection to its exhibition in small doses in anæmic persons, where a tonic is seemingly required.

R. Liq. potassii arsenitis,  $\bar{3}j-ij$ .  
 Vini ferri,  $\bar{3}iv$ . M.

S. Teaspoonful in wineglass of water, directly after meals.

Piffard recommends the bromide of arsenic in some varieties of acne. The sulphide of calcium sometimes acts well in pustular acne and in acne indurata. So far as I have observed, its influence is limited to the prevention of undue suppuration, but it does not seem to exert any permanently curative effect. The doses usually prescribed are too large. From a tenth to the fortieth of a grain, in



gelatine coated pills, three or four times a day, are sufficient.

The fluid extract of ergot in half-drachm doses three times a day is occasionally useful, and again appears perfectly inoperative. I have not found the internal use of ichthyol of any advantage. It has been claimed that in the acne of young men due to sexual causes great relief has been procured from the passage of cold sounds into the urethra, also that hot vaginal douches have been equally successful with young women.

The judicious local treatment of acne is of the greatest importance. According to circumstances it may be either of a soothing or of a stimulating character. G. II. Fox has very wisely called attention to the fact that in some cases of acne the sebaceous element is predominant, while in other cases the vascular disturbance is the notable feature present. In these latter cases, in addition to the general measures already mentioned, the most soothing remedies are demanded, and, frequently, are all that are required. The following lotions are applicable under these circumstances :

R.	Zinci oxidi,	℥ss.	
	Pulv. calaminæ præp.,	℥iv.	
	Glycerini,	℥j.	
	Liq. calcis,	℥vij.	M.
S.	Shake. Local use.		
R.	Bismuthi subnitratis,	℥ij.	
	Acidi hydrocyanici diluti,	℥j.	
	Glycerini,	℥ij.	
	Aquæ rosæ,	q. s. ad ℥iv.	M.
S.	Local use.		

The unguentum aquæ rosæ or a bismuth salve may be employed when lotions do not agree. In some slight cases a powder of precipitated sulphur diluted with two or three parts of rice powder is often of advantage.

In the great majority of instances of this disease active measures are called for from the first. All comedones should be thoroughly but gently expressed with a watch-



key or other suitable instrument. Papules and pustules should be stabbed with an acne lancet and allowed to bleed freely, and the hemorrhage may be encouraged by the application of hot water. It is well to prick even the papules as soon as they appear, since their course is thereby shortened. In extensive eruptions of acne some physicians go over the surface with a dermal curette, tearing off the tops of papules and pustules, thus allowing the easier extrusion of the sebaceous plugs. In acne indurata the incisions into the nodules should be made with a free hand. After the employment of any of these harsh mechanical methods the patient should foment the parts for a few minutes with cloths wrung out in hot water, and afterwards mop on a soothing lotion. In cases of moderate severity, after expressing sebaceous plugs and incising lesions, I am in the habit of ordering vigorous friction every night with a piece of flannel dipped into a soap-wash composed as follows :

R.	Saponis olivæ præp.,	
	Spt. vini rectificati,	āā ʒj.
	Aquæ rosæ,	ʒvij. M.
S.	For local use.	

In the morning a soothing ointment or lotion is to be applied.

In other cases the immediate employment of some preparation of sulphur has a more beneficial effect, as for example :

R.	Sulphuris præcipitati,	ʒj.
	Alcoholis,	ʒiv.
	Ætheris,	ʒiijss. M.
S.	Shake. Apply at night and once or twice during the day.	

R.	Sulphuris loti,	ʒiij.
	Spt. camphoræ,	ʒiij.
	Sodii biboratis,	ʒij.
	Glycerini,	ʒvj.
	Aquæ,	q. s. ad ʒiv. M.
S.	Shake the bottle and apply freely.	



According to Rohé the so-called menstrual acne may be satisfactorily combated by using this wash :

R.	Potassæ sulphuratæ,	
	Zinci sulphatis,	āā ʒss.
	Glycerini,	ʒj.
	Aquæ rosæ,	q. s. ad ʒiij. M.
S.	Apply two to three times daily.	

This is also valuable in acne generally.

Lotions containing mercury are occasionally of service :

R.	Hydrargyri bichloridi,	gr. j.
	Tr. benzoini,	ʒij.
	Mist. amygdalæ,	ʒvj. M.
S.	Apply lukewarm.	

I frequently order this to be mopped on in the morning after thorough inunction with a sulphur ointment the preceding night.

Without doubt one of the most efficacious methods of treating acne indurata is by the Vleminckx's solution :

R.	Calcis,	ʒss.
	Sulphuris sublimati,	ʒj.
	Aquæ,	ʒx.
Boil down to six ounces and filter.		

In acne of the back this solution may be used diluted one-half with water at first, and then, after tolerance is established, of full strength. We are indebted to C. Heitzmann for directions as to its systematic employment in acne of the face. Before the use of the solution is commenced, some time—in severe cases several weeks—should be consumed in getting rid of flesh worms by inunctions with strong lather of green or castile soap; also during the treatment the emptying of comedones must be kept up and continued from time to time to prevent relapses, and all lesions must be incised. The preparatory treatment having been accomplished, the patient is directed to commence with the solution in the strength of one teaspoonful to five of water; after three or four days he will take



one to four and a-half of water; then one to four, and so on with one teaspoonful less of water every fourth night until the remedy comes to be used pure. Sometimes the solution cannot be pushed to its full strength, and the result is obtained with dilutions of one, one-half, one-third, or less; or it may be that, instead of increasing the strength every fourth night, we must pause at a given dilution for a week or more, and then proceed gradually. The remedy should be merely mopped on at first; and afterwards, if it is tolerated, rubbed in more firmly. If much dermatitis is set up, a little cold cream may be smeared on during the day, or the applications may be intermitted for a short while.

I have not found ichthyol of any special value in acne, besides being very disagreeable. It seems that Unna has never recommended it in acne vulgaris, but only in rosacea, although he is generally credited with the suggestion.

Ointments are also advised in the treatment of acne, but they are not so serviceable as liquid preparations. They should be thoroughly worked into the skin.

R.	Sulphuris hypochloridi,	℥ij.	
	Potassii carbonatis,	gr. x.	
	Adipis benzoati,	℥j.	
	Olei amygdalæ amaræ,	gtt. ij.	M.
S.	Rub in a small quantity at night.		

The following is a very acceptable preparation.

R.	Sulphuris præcipitati,	℥j.	
	Ung. aq. rosæ,	℥j.	M.
S.	Apply at night.		

Ointments of the various mercurial preparations have been prescribed for cases needing active stimulation, *e. g.*, protiodide of mercury (gr. v–x ad ℥j), and the white precipitate (gr. xx–xxx ad ℥j).

Lassar recommends the following paste for all forms of acne :



R.	Naphthol.,	grs. xxxv.
	Sulphuris præcipitati,	ʒiij.
	Vaselini,	
	Saponis viridis,	āā ʒjss.

This is to be spread upon the skin to the thickness of the back of a knife blade, and left on for fifteen or twenty minutes, when it will cause a little burning. It is then to be wiped off with a soft cloth, and the skin powdered with talc. The skin soon becomes inflamed, then turns brown and finally peels off. The desquamation can be hastened by the application of Lassar's paste with two per cent. of salicylic acid. When the desquamation has ceased, the acne will be found to be greatly benefited.

To the sluggish nodules of acne indurata, I am in the habit of applying Unna's salve muslin of mercury and carbolic acid.

Hutchinson touches lesions as they appear with a small quantity of the acid nitrate of mercury. W. G. Smith prefers the pure carbolic acid, afterwards covering the spot with a film of collodion. Faradization of the face with a sponge electrode—the positive pole to the nape of the neck and the negative to the affected parts—is often very useful. The applications are to be kept up for ten or fifteen minutes, at intervals of a few days. I do not think so well of galvanism.

The various medicated soaps are not to be depended upon alone, but may be sometimes used in conjunction with other agents. The superfatted varieties containing salicylic acid, sulphur and resorcin are the most efficient. Pospelow and Jackson strongly recommend massage. According to the first named authority the rubbing should follow the direction of the gland-ducts and muscle fibers of the skin in order that the sebum may be expressed from the glands. It should be employed for ten minutes at a time, morning and evening, and kept up for several months. Hyde's ingenious "massering ball" may also be employed in this connection.

PROGNOSIS. The prognosis of acne is essentially favor-



able ; that is to say, it is in no way dangerous to life, and in most cases tends to spontaneous recovery in the course of months or years. It rarely persists through life, but in serious cases great disfigurement may ensue in the shape of cicatrices, or even keloidal growths, which latter, however, generally disappear in time. The removal of existing lesions is not usually difficult ; the prevention of relapses will sometimes tax the ingenuity of the physician to the utmost. Strange as it may seem, severe cases are more manageable than light cases ; but taken all in all the prognosis may be regarded as good.

### ACNE ROSACEA.

This is a chronic, hyperæmic or inflammatory affection of the skin, occupying principally the region of the face, and more especially the nose, cheeks, chin and forehead. I have also seen it well marked on the neck. The prominent clinical features are redness, papulation and pustulation, the appearance of dilated blood vessels, and sometimes an excessive new formation of connective tissue.

It is customary to divide the disease into three stages, but one stage does not necessarily follow the other.

Generally simple hyperæmia is first observed ; later on the congestion becomes permanent ; the vessels dilate, the skin is thickened, and a secondary acne supervenes ; finally, but by no means in all cases, or even in the majority, the morbid process advances a step further, and decided hypertrophic changes occur, and the parts involved, particularly the nose, will assume a lobulated and hobnailed appearance, and in aggravated cases broad bands and pedunculated red tumors of the size of the fist may be formed (Rhinophyma).

The clinical picture presented in rosacea varies a good deal in different cases, and from time to time in the same case. A form of the disease is common in ill-conditioned young people in which there is simple redness of the skin, with a cold surface, and more or less accompanying seborrhœa. Here the nose is the common site of the disorder.



In another class of cases the degree of hyperæmia changes from day to day or from hour to hour ; sometimes the face is all aflame, and again almost normal, or there is much complaint of burning and even slight itching. Sometimes the vascular dilatation is the most prominent element in the case, and there will be little or no intervening hyperæmia of the skin. A common seat of rosacea in women is upon the chin.

The causes of acne rosacea are numerous. Among the more common are menstrual irregularities, anæmia, chlorosis, dyspepsia, constipation, the gastric catarrh of drinkers, and exposure to excessive heat or cold. In men it is most frequent after forty years of age, although not uncommon in quite young men ; and in women it is most apt to supervene at puberty or at the menopause. The disorder is nearly always a reflex one. Its initial stage is caused by prolonged or often repeated stasis in the capillaries, and all the subsequent pathological changes find their explanation in this fact. Unna urges that the prefix “acne” should be dropped entirely, for that rosacea is in nineteen out of twenty cases seborrhœic, and only rarely an angio-neurosis, and that this latter condition never leads to hypertrophy.

DIAGNOSIS. As a rule the diagnosis is not difficult. It should be differentiated from simple acne by the presence of the more or less diffused redness, the dilated blood vessels, and the subjective sensations. It is to be distinguished from lupus erythematosus by the fact that in the latter the skin is covered with adherent white or yellowish scales, with prolongation into the sebaceous glands, and that there may be well-defined loss of substance ; in lupus vulgaris there will be apple-jelly colored tubercles present and more or less crusting or cicatrization.

The tubercular syphilide may offer some points of resemblance ; but the chronicity of the rosaceous process, the absence of ulceration and the resulting crusts and scarring should be sufficient for the proper differentiation of the two affections.



**TREATMENT.** The treatment is both internal and local. The cause or causes of the disease should be diligently sought and removed if possible. The same general rules as to diet and hygiene mentioned in connection with acne are equally applicable here. Dyer obtained a good result in a case of hypertrophic rosacea from the administration of thyroid extract. Topically, the applications should be suitable to the stage of disease present. In the hyperæmic stage ointments and lotions of sulphur and mercury are indicated (see acne). The following lotion is recommended by Van Harlingen :

R.	Sulphur. præcipitati,	3j.
	Pulv. camphoræ,	gr. v.
	Pulv. tragacanthæ,	gr. x.
	Aquæ rosæ,	
	Liq. calcis,	āā 3j. M.
S.	Apply once or twice a day.	

In cases of the second degree all pustules should be opened, tubercles freely incised, and the invaded region should be fomented with hot water several times a day. The best local application in my experience is the Vleminckx's solution, which should be employed in the same manner described under the treatment of acne.

The best method of destroying the varicose vessels is by electrolysis as first suggested by me several years ago.<sup>1</sup> A fine jeweler's bristle or dental reamer is attached to the negative pole electrode of a galvanic battery (by means of a suitable holder) and the needle is inserted into the vessel for a sufficient depth; the circuit is then closed by the patient touching the positive sponge electrode with the tips of the fingers or better still by placing one or more fingers in a bowl of water in which this pole has been placed; after the electrolytic action has been developed, as shown by the vessel becoming a white line, the fingers are removed from the positive sponge electrode, and the needle is withdrawn from the tissues.

<sup>1</sup> Archives of Dermatology, Oct., 1879.



Sometimes one puncture is sufficient for obliteration, but if the vessel is long several insertions may be made along its course. If the operation is carefully done no scarring need result. It is true that a collateral circulation is often set up and the operation must be repeated; but in cases where the cause of the disease has been removed I have seen permanent results. In the meantime the improvement in the patient's appearance is very noteworthy. The strength of current employed will depend somewhat upon the locality operated upon, the size of the vessels, etc. It is probably best in the various electrolytic operations on the skin to employ a milliamperemeter, but it is not absolutely necessary.

Various other methods of treating rosacea have been recommended. In cases of a marked type many employ some form of multiple puncture or scarification. Vidal speaks highly of what he calls linear quadrilateral scarifications. Shoemaker uses a needle-knife with which he makes numerous punctures, while at the same time he constantly applies hot or very warm water. Kaposi advises a solution of iodated glycerine (five parts each of pure iodine and the iodide of potassium to ten of glycerine), which is painted over the affected region eight to twelve times a day for three or four successive days, and immediately covered with gutta-percha paper. Carbolic acid, one in two to six of alcohol, is said to be useful by Duhring. Abraham recommends in the first two grades of rosacea the subcutaneous injection of ninety-five per cent. alcohol. Not more than thirty drops of the fluid are required, and the injections should not be made oftener than three times a week. Excellent results are claimed if strict antiseptic precautions are observed.

In the hypertrophic variety of rosacea with production of excessive outgrowth of tissue, ablation by the knife is the only remedy. I have relieved moderate degrees of thickening with electrolysis, plunging the needle quite freely into the tissues in various directions.

PROGNOSIS. The prognosis in cases of mild grade is



generally favorable, and even where the disease has existed for a long time, if the cause can be ascertained and removed, gratifying results may be obtained. On the other hand, palliation is frequently all that can be promised.

### ACNE VARIOLIFORMIS.

This comparatively rare and little understood affection has been variously termed *acne necrotica*, *acne varioliformis*, *acne atrophica*, *lupoid acne*, *acne pilaris*, *acne atrophique*, etc. Dubreuilh<sup>1</sup> from an extended experience regards these various terms as describing the same disease. The primary lesion is a papule from lentil to bean size, reddish-brown in color, firm to the touch, with the summit, especially on the scalp, generally pierced by a hair. In a few days the apex of the lesion presents a yellow, waxy appearance from which develops a yellow or brown crust, which in three weeks or longer falls off, leaving a depressed, supple scar suggestive of the pit of small-pox.

The seats of predilection of the eruption are the brow, the anterior border of the scalp, the temples, behind the ears, and on the neck; more rarely the affection may attack the trunk. Unna says that there is a superficial and a deep form, the latter originating in the former. Sometimes the lesions occur in large numbers, and as the disorder pursues a chronic course the disease may display different stages of evolution. It is only proper to state that all authorities are not agreed as to the identity of Boeck's *acne necrotica* with *acne frontalis*, or *folliculitis varioliformis*. Unna describes a small bacillus in connection with this disease, which resembles his *acne bacillus*, but is distinguished from it by not forming a comedo. A small streptococcus and staphylococci have been demonstrated. The histopathology is unsettled.

The etiology of the disease is obscure, some observers ascribing it to the syphilitic diathesis, others to the most diverse causes, such as arthritism, alimentary irritations,

<sup>1</sup> Archives Cliniques de Bordeaux, Aug., 1894.



etc. Elliot thinks that occasionally heat is a factor of possible importance. Hyde suggests a tuberculous origin. *Acne frontalis* should be distinguished from *acne vulgaris* and the pustular syphilide. The existing lesions are easily cured by inunctions with a sulphur ointment, but it is difficult to prevent relapses. Where the patient is known to be syphilitic a mercurial treatment should be instituted.

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## AFFECTIONS OF THE HAIR FOLLICLES.

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### CANITIES.

Canities, or grayness of the hair, may be congenital or acquired. In the congenital variety the grayness is usually limited to tufts, and this is sometimes observed to be a family peculiarity. The acquired form may be premature or else occur in the course of advancing years. I have seen the hair remain permanently gray in the affected regions of alopecia areata. Abrupt changes of the hair from its normal shade to the whiteness of age have been often reported, and a few cases are on record where the hair has changed several times from dark to gray and back again, and also where gray hair has become dark in extremely old people. The so-called "ringed hair" consists of alternate rings, in which one is normal in color and the next one gray.

### HYPERTRICHOSIS.

Hypertrichosis, hirsuties, hypertrophy of the hair, or, as termed by the laity, superfluous hair, refers in a general way to that condition in which the capillary growth is unnatural. This abnormality may have reference to length, thickness of the hair, to the situations upon which it may occur, as well as to the age and sex of the person bearing it. Hypertrichosis may be more or less general, except in places where normally there are no hairs, or it may be



limited to certain regions ; besides it may be acquired or congenital.

Medical literature is full of examples of rare and unusual cases of hypertrichosis, but the dermatologist is practically interested only in the facial hirsuties of women. These cases are very distressing, and when the obnoxious growth occurs on the faces of young women it is the source of constant mortification and mental depression, and in some instances leads to profound melancholia. Even older women, who have arrived at the time of life when, as Balzac says, a woman takes to the razor, are averse to such a deformity, and it is all the more distressing to those of the Anglo-Saxon race in whom, even after the menopause, hirsuties rarely develops.

The character of the growth as regards the amount of hair, its texture and the locality implicated differs very much in different cases. In rare instances there may be a full beard, as coarse as a man's,<sup>1</sup> or the hairs may be fine and comparatively few in number. In my experience the growth is more fully developed on the chin than elsewhere, next on the upper lip, and lastly on the cheeks, near the margin of the hair. Often when the beard is tolerably full on the chin there will be but little hair on the upper lip, and then mostly at the corners of the mouth.

The causes of hypertrichosis are more or less obscure, although theories accounting for its existence are sufficiently numerous. Racial tendency, heredity and nervous influences may be mentioned as probable causative factors. Unna's theory is interesting. He believes that congenital hypertrichosis is due to a persistence of the fœtal or primitive hair, in reality an arrest of development.

Acquired hirsuties is perhaps often the result of local

<sup>1</sup>The first operation ever made by electrolysis for facial hirsuties was in the case of Miss X., who had a patriarchal beard. The case was reported by me in the St. Louis Med. and Surg. Jour., Nov., 1877. In the Phila. Med. News, May 5, 1888, I published a supplemental account of this case, stating that the result of the treatment, after a number of years of patient work, had been thoroughly satisfactory.



hyperæmia, brought about by various causes. Growth of hair under poultices, and upon the chests and arms of laboring men exposed to the heat of the sun's rays, etc., are cases in point.

Sulphur, for example, is a most powerful pilary stimulant, and I have seen a number of cases where the drug had been applied for months or years, in which hypertrichosis developed. The constant frictions were also no doubt an additional element.

Certainly, as regards facial hirsuties, women of the Latin races seem to be particularly predisposed.

Hamilton called attention some time ago to the fact that insane women often suffer from hypertrichosis of the face. However this may be, it is a matter of observation that superfluous hairs will often set up profound derangement of the nervous system.

My experience in the treatment of the facial hirsuties of women, which has been unusually large, and has extended over a period of twenty-five years, has taught me that the apparent causes of this deformity are by no means uniform. I can emphatically state that in fully one-third of the cases there existed some sexual derangement, most frequently amenorrhœa. Some few of the patients were more or less masculine in voice, figure and mental traits. In no inconsiderable proportion hereditary influence was strongly marked. The fact that hairs are apt to develop for the first time at the menopause would seem to indicate that derangement or abeyance of the menstrual functions possesses a considerable etiological importance. Finally, in a certain number of patients there were no ascertainable causes for the hirsuties.

TREATMENT. The destruction of the growth by electrolysis is the only permanent and satisfactory method. It was first proposed by Michel, of St. Louis, for the radical cure of trichiasis, and was afterwards applied to the facial hirsuties of women by myself.<sup>1</sup>

<sup>1</sup> The history of this operation is as follows: The first publication on the subject was made by Michel in an article on the treatment of



For the purposes of this operation it is necessary to have a good galvanic battery, a number of fine needles, a suitable needle holder, a sponge electrode and the necessary insulated cords. Originally I employed a delicate sewing needle, which I gave up in favor of the jeweler's bristle, recommended by Fox; but of late years I use almost entirely the irido-platinum needle, which has the great advantage of being readily bent, and of not being easily broken; moreover, it may be made to follow the course of the follicle as a soft sound does the urethral canal, thus rarely penetrating the follicle wall, as often happens with the stiff needles.

Any suitable needle holder may be employed. The one shown in the annexed cut, which I devised some years ago,

FIG. 33.



Author's needle holder.

answers the purpose very well. A pair of light forceps with an easy spring is also required. Personally, I always make use of a lens, but this is not a necessity, and interferes somewhat with the rapidity of the work.

The patient being seated in a reclining chair, facing a trichiasis, contributed at my suggestion to the St. Louis Clinical Record, Oct., 1875, which was at that time under my editorial care. In Piffard's work on skin diseases, issued in 1876, the author states that he had successfully removed hairs from moles in this way. In the St. Louis Med. and Surg. Jour., Nov., 1877, I reported the case of a bearded woman upon whom this method was being successfully employed. At the meeting of the Am. Dermatological Association, Sept., 1878, I made a formal presentation of the merits of this operation. In the St. Louis Courier of Med., Feb., 1879, Dr. Michel contributed another masterly paper on trichiasis and distichiasis, in which the value of electrolysis was again brought forward by him.

Since this time numerous papers have been written on this subject, both in America and in Europe, notably by Fox, Rohé, Behrend, Michelson and Brocq. I have given these details because in an article of mine, published in the Monatshefte f. prakt. Dermatol., Nr. 10, 1885, much confusion was created by the fact of printer's errors in dates, the proof not having been submitted to me for correction.



good light, the needle attached to the negative electrode is entered into the follicle, the hair being left *in situ* as a guide; after this has been accomplished, and not till then, the patient is told to place a couple of finger tips on the previously moistened positive sponge electrode.<sup>1</sup> The needle is not withdrawn until a slight frothing is observed around its stem, showing that the electrolytic action has been fully developed; but to avoid shock, the positive sponge electrode is first released by the patient, and then afterwards the needle is removed, being exactly the reverse of the initial steps. An experienced operator will find no difficulty in introducing the needle directly into the follicle, and he can be assured of this fact by the following circumstances:

1. If the needle miss the follicle, and pass into the surrounding tissues a sharp, pricking sensation will be experienced by the patient, but if the instrument be properly introduced into the mouth of the follicle, and allowed to sink by its own weight (and on this account a moderately heavy holder is preferred) to the bottom of the canal, no pain will be felt until the contact with the positive electrode occurs.

2. The practiced operator will readily detect an unusual resistance if the needle fail to pass down the follicle.

3. In the majority of cases the proper direction of the needle is manifested by the appearance of the sebaceous secretion, and sometimes this is evident immediately upon the passing of the needle, even before the circuit is closed.

As a rule a few seconds—twenty to forty—suffice for the destruction of the papilla; but this is largely a matter

<sup>1</sup> Of late years I have found it much more satisfactory to place the positive electrode in a goblet or small bowl of water. The patient, instead of touching the sponge, places one, two or three finger tips in the water as may be required. This simple device has many decided advantages. The usual methods followed in electrolytic operations, namely, grasping the sponge with the whole hand or fastening it to some portion of the body, are barbarous, and, moreover, almost invariably lead to bad results.



of experience and depends upon various circumstances, such as the strength of current employed, the character and situation of the hairs, etc. If the electrolytic action has been properly developed and skillfully applied, the hair will come away with the very gentlest traction of the forceps, a point always to be tested at once; but if force be required for its extraction it would be a sign that the operation has been ineffectual, and the needle must be re-introduced at once, or the process may be repeated at a subsequent sitting. I usually employ ten or twelve cells of a freshly charged twenty-cell galvanic battery, but after a time the number of cells will have to be increased. A current measurer is convenient, but not absolutely necessary, as I know from many years' experience. From two to four milliamperes are sufficient.

The amount of pain experienced differs in different people, and also according to the situation of the hairs; but generally a tolerance is soon established. I have found no benefit from the local use of cocaine either in oleate or solution.

The immediate effect of the electrolysis is the formation of an urticarial wheal, and also the production of a variable amount of circumscribed congestion and perifollicular exudation; but as I always direct the patient to bathe the parts in very hot water, for ten minutes at a time, several times a day after each operation, this local disturbance readily subsides.

When the hairs are closely set it is not advisable to operate on each one in succession, but they may be gradually picked out here and there at different sittings, until the whole field has been gone over. Thus by the use of hot water to allay inflammation, and the selection of different localities for operation, the sittings may be more frequent, and the work considerably expedited; and, moreover, by using due caution and skill visible scarring may be altogether obviated. On the upper lip, however, where the skin is thin, and if the hairs are numerous, minute pits may be produced, and, under exceptional circumstances in



other situations, as, for example, when the hairs are very coarse and abundant, the same effect may ensue; but it is certainly exceptional. From twenty to sixty hairs may be removed at each operation, and the sittings usually may last from one-half to three-quarters of an hour.

The histological changes after electrolysis have been investigated by Giovannini.<sup>1</sup> In about half the cases the needle passes through the wall of the hair sac, but, however, in most instances the effect on the epithelial cells of the matrix and in the papilla are sufficient to prevent the regrowth of the hair. The sebaceous and sweat glands are involved and also the smaller hairs contiguous. The inflammation lasts for a few days, but by the sixteenth day the necrosed tissue is cast off. Some cornified epithelial cells, parts of the dead hair, may be found in the tissues up to the fifty-eighth day. On the third day the growth of new connective tissue begins, which ends in a scar; and this scar, if the electrolysis has been successful, obliterates the hair follicle and occupies its site. This quite agrees with clinical observation.

I believe it is an entirely tenable statement that from eighty to ninety per cent. of hairs are destroyed by the first operation, assuming, of course, that proper skill and suitable instruments have been employed. Hairs that regrow must be operated on again. It does not follow, however, that all the hairs that reappear represent operative failures; on the contrary, in many patients, especially young people, the tendency to hair production still continues, and the electrolysis must be repeated from time to time. In older people, or in circumscribed regions, there is little or no tendency of this sort, and the returns really represent partial or complete failures. If the hair papilla, and the hair-bearing surface of the follicle be destroyed, the hair, of course, cannot be regenerated; but it sometimes happens that the destruction has not been sufficiently radical, in which case it is necessary to do the work over

<sup>1</sup> Archiv. f. Derm. u. Syph., Aug., 1895. Quoted by Montgomery in Twentieth Century Pract. Med.



again.<sup>1</sup> A plan that I have long followed, and one that overcomes some of the causes of failure, is constantly to move the needle up and down, and from side to side, thus ensuring tolerably extensive destruction in and about the hair-bearing regions. It is possibly true that the fine downy hairs interspersed between the operable ones are stimulated to a lustier growth by the electrolytic depilation, but of this I am not quite convinced; but, even if this does occur, it makes very little difference, as in time they would assume larger proportions, even if left alone, and would have to suffer ultimate removal.

Other methods of removing hair, such as by shaving, epilation, depilatories, etc., are of no permanent value, and by unduly stimulating the growth are productive of more harm than good. If, however, for any reason, it is desired to employ a depilatory, the best results are obtained from Boettger's paste of calcium sulphhydrate, which is highly recommended by Dr. A. W. Brayton.<sup>2</sup>

### ATROPHIA PILORUM PROPRIA.

Atrophy of the hair occurs as the result of various local diseases of the scalp, such as eczema, seborrhœa and the parasitic affections, and also as an attendant upon general constitutional disorders like phthisis, syphilis, etc. Such atrophy may be called *symptomatic fragilitas crinium*. In *idiopathic fragilitas crinium* there is no apparent general cause for the atrophy of the hair. In these cases the hair is dry and brittle and splits at the free ends, or the shaft of the hair is thinner at one point than at

<sup>1</sup> Jamieson (Dis. of Skin, p. 398) calls attention to another source of failure: "When the papillary hair has separated from the papilla, and become a bed hair, growing from the prickle cells, and no longer having a medulla, a process is sooner or later sent downwards from the base of the hair, to form the nucleus of a new one, which in time displaces the bed hair. Now this bud may escape the needle thrust into the follicle, and while the bed hair is loosened and cast off, and the lining of the follicle disintegrated by the electrolytic action, the young hair continues to grow, and in time makes its appearance on the surface."

<sup>2</sup> Indiana Med. Jour., Aug., 1896.



another, showing somewhat regular irregularities. In a case reported by Duhring the hair began to split within the bulb, and there was much accompanying irritation of the skin. Hyde records a somewhat similar case.

Jackson recommends that when the free end of the hair is involved it should be cut above the cleft, and if the beard is affected shaving would remove the deformity and probably bring about a cure.

### TRICHORREXIS NODOSA.

Trichorrexis nodosa usually invades the hairs of the beard, and is confined to the male, but it is occasionally met with in the hair of the head, and also among women. To the touch the hairs feel irregular and knotty, and upon casual inspection the beard looks ragged, and as if the ends had been singed. Upon closer inspection there will be observed along the hair shaft shining, bulbous swellings, looking not unlike the ova of pediculi. The hairs are firmly seated in the papillæ, but fracture readily, the break occurring through the nodes. These little nodes are due to the splitting apart of the hair filaments, presenting an appearance as if the ends of two brushes had been pressed together and interlocked.

Raymond says that the disease is common on the hairs of the labia majora, especially in fat women, and also on the scrotal hairs in men. He believes it to be communicable, which fact would explain the apparently hereditary nature of a number of reported cases. Essen<sup>1</sup> in a case of trichorrexis nodosa affecting the beard reports that a small, well characterized bacillus was found almost constantly in the diseased hairs, and that it differed materially from the one described by Hodara. Upon normal hairs and in three cases of trichorrexis capillitii it was not found. Inoculations under proper precautions produced a similar condition of the beard, but whether this in turn will be productive has not been determined. On the other

<sup>1</sup> Monatshft. f. prakt. Derm., Feb., 1896, Bd. XXII.



hand, Barlow and Richter are not inclined to accept the parasitic theory, but look upon the condition as due to mechanical causes or nutritional changes in the hair. Among the women of Constantinople Hodara has discovered a form of the disease apparently due to a definite bacillus.

The treatment of these cases is not very encouraging. Schwimmer recommends the following ointment, which may be rubbed in morning and evening:

R. Zinci oxidi,	gr. vij.
Sulphuris loti,	gr. xv.
Ung. aq. rosæ,	℥ss. M.

Sabouraud speaks highly of a lotion made in this way:

R. Hydrargyri bichloridi,	gr. iv.
Acidi tatarici,	gr. viij.
Resorcini,	gr. xv-xxx.
Alcoholis,	
Ætheris,	āā ℥jss. M.

Besnier advocates plucking the hairs and the application of pure or dilute tincture of cantharides. Shaving may be tried.

### PLICA POLONICA.

This is nothing more than the matting together of the hair in a dirty mass of filth consisting of extraneous matter, pediculi, scales, pus, sebum, etc.

The odor is exceedingly offensive.

With the ignorant people among whom it occurs, mostly Poles or Russians, there is a superstitious feeling about the removal of the plica.

Various conditions of matting of the hair have been noted occurring in connection with neuralgia, following typhoid fever, etc.

Stelwagon's<sup>1</sup> case is interesting as a curious form of plica.

<sup>1</sup> Am. Jour. Med. Sci., 1892, p. 700.



**MONILETHRIX.**

This disease, which was first described by W. G. Smith, affects usually only the hair of the scalp, and may be confined to localized areas at the temples, the crown or the back of the head. The hair is fine, sparse and brittle, and the affected parts have the appearance of being bald; there is also present a marked degree of Keratosis pilaris.

The hairs present along their shafts a series of smooth, solid nodes that extend from deep in the follicle to their ends. The internodular parts of the hair are lighter in color than the apparently nodular parts. The fracture always occurs in the part of the shaft between the rings, wherein it differs from trichorrexis nodosa. This disorder is considered practically congenital inasmuch as it occurs very early in life, but it would seem that there are exceptions to this rule. It would also appear to be an hereditary affection. Bonnet<sup>1</sup> maintains that the narrowing of the shaft results from a contraction of the circular muscular fibers below the point of emergence of the duct of the sebaceous gland. The hair below this point, consisting of a plastic mass of soft young cells, gets blocked and pressed in the narrow opening. The contraction of the circular muscular fibers then slightly relaxes and allows the hair to resume its normal diameter, only to contract again, etc. Each of the spindles is about one millimeter in length, about one day's growth. The condition is permanent, and there is no directly curative treatment.

**LEPOTHRIX.**

This disorder, first described by Paxton in 1869, affects principally the axillary hairs and those situated on the genital regions. Upon microscopic examination the shafts of the hairs are found to be the seat of firm concretions, sometimes ensheathing them and sometimes arranged in the form of irregular nodules. The hairs readily fracture

<sup>1</sup>Quoted by Montgomery in Twentieth Century Practice. An admirable review of this whole subject may be found in Unna's Histopathology of the skin.



and to the unaided eye appear rough and without lustre. The masses sometimes have a red color in the axilla. The disorder is due to a bacillus in the cortex of the hairs. Montgomery recommends the following lotion :

℞. Hydrargyri bichloridi, gr. viij.  
Alcoholis dilut., ℥iv. M.

S. To be sopped on either with the hand or with absorbent cotton, once a day after washing.

### PIEDRA.

Dr. N. Osorio, of Bogota, first described this affection in 1876. It is almost exclusively found in Colombia and among women. The concretions are black, stone-like (hence the name) particles scattered irregularly along the shaft of the hair beginning a quarter to a half-inch from the root and extending to the point. The disease is caused by a fungus.

### TINEA NODOSA.

Morris and Cheadle first described this fungus disorder of the hairs of the whiskers or moustache. The nodules consist of fungus spores similar to those of trichophyton. Parasitocides freely applied and shaving or clipping the hairs will effect a cure.

### ALOPECIA.

This is a general term used to denote a greater or less degree of baldness arising from various causes. Alopecia has been divided into the following varieties :

#### Congenital Alopecia.

Occasionally children are born into the world with either complete or partial baldness. Often the alopecia is only temporary, hair of normal caliber making its appearance in after-life. If the congenital baldness is limited to a small portion of the skin the defect is apt to be permanent.



### Senile Alopecia.

The loss of hair in the aged generally begins on the crown of the head, and spreads gradually forwards, then sideways and backwards. Women retain their hair longer than men. There is accompanying atrophy of the skin and other evidences of advancing years.

### Idiopathic Premature Alopecia.

In many persons long before middle age the hair begins slowly to fall out, and follows the course common to senile alopecia, except that there has been no antecedent grayness. The process is usually very gradual; the first strong hairs are shed, and are then replaced by those of weaker growth, and so on until the parts are left bare and shining. The hairs of the beard generally retain their pristine vigor. This condition is often hereditary. It is more than likely that further observations will show that most of these cases are in reality due to definite morbid states.

### Symptomatic Premature Alopecia.

As its name indicates, this form of baldness is an abnormal loss of hair due to a variety of causes. It may be partial or general. The etiological factors in its production are numerous, of which the more frequent are general disturbances of nutrition, fever, mental emotion, dyspepsia and prolonged overwork, and among the local causes are to be noted seborrhœa, eczema, lupus erythematosus, variola, erysipelas, syphilis and leprosy. Syphilitic alopecia is usually an early manifestation of the diathesis, but may supervene later with the tubercular and gummatous lesions.

Syphilis may also induce loss of hair in other regions than the scalp, for example, in the eyebrows and over the pubes, especially in women.

In the form of the disease known as *alopecia follicularis*, when the scalp has been invaded by the parasites of ringworm or favus, the baldness may be permanent, es-



pecially when due to the presence of the achorion *Shoenleinii*.

### **Alopecia Pityrodes.**

This disease, also known as alopecia furfuracea and pityriasis capitis, is exceedingly frequent and one of the most common causes of early baldness. It is rare before puberty, and is oftener observed in men than in women. One of the earliest symptoms to attract attention is the dandruff which falls freely over the coat-collar and even may be seen in the hair as a fine dust. After the pityriasis has existed from five to seven years, as a general thing, the patient is alarmed by finding that the daily loss of hair is relatively greater than formerly. In the combings are found an increased number of "pointed hairs," or hairs that have failed to reach a full growth, but approach in type to lanugo. This process continuing, all the hairs in the affected areas become converted into lanugo, until, at last, even the downy growth disappearing, the scalp is left bald and ivory-like in appearance. Subjective sensations in the form of burning, tingling or itching are sometimes complained of by patients.

At times the more distinctly seborrhœal character of the affection may be noted, the scales being thicker and greasier.

Although clinically all cases of pityriasis of the scalp do not lead to baldness or even shedding of the hair, which fact Unna explains on histological grounds, it has long been known (Fincus) that this form of loss of hair is invariably associated with an abundant dandruff. This pityriasis is now regarded by Unna as a symptom of chronic desquamative catarrh of parasitic nature—the so-called seborrhœic eczema of the scalp. According to Sabouraud common alopecia is only a chronic, oily seborrhœa, of which alopecia areata is an acute form. The so-called seborrheal cocoon, he states, found in the upper part of the hair follicle, between its opening and that of its sebaceous orifice, contains in its undegenerated stage an immense quantity of an almost pure vegetation of a micro-bacillus.



The bacillus itself, being circumscribed in the upper third of the hair follicle, does not reach the papilla, but the lethal influence is produced by toxins generated in the neighborhood of the cocoon. This is not the place to discuss the different views of Unna and Sabouraud, but the practical fact remains that the therapeutics of these various affections must be based on the theory of parasitism.<sup>1</sup> Granting the parasitic nature of the disorder, it is likely that a suitable soil, such as is furnished by debility, anæmia, etc., may be a prerequisite for the development of the micro-organisms. The disorder should be presumptively contagious, but the evidence is negative in this direction. However, the greater frequency of baldness in men than in women may be due to the fact that the latter are more commonly exposed to infection in barber shops.

In addition to the alopecia pityrodes capillitii just described, Michelson calls attention to a universal form of the disease.

**TREATMENT.** In congenital baldness no particular plan of treatment is demanded, as the condition soon corrects itself; and in senile alopecia all medication is useless. Neither can we hope to effect much in idiopathic premature baldness. Attention to the general health, together with a strict surveillance of the habits and diet of the patient, and the use of local stimulating applications, are the means to be tried. The following preparations are worthy of attention :

R.	Quiniæ sulphatis,	gr. x.
	Spt. myrciæ,	ʒiij.
	Glycerini,	ʒj.
	Sodii chloridi,	ʒij.
	Aquæ,	q. s. ad ʒviiij.
S.	Local use.	M.

Skinner<sup>2</sup> recommends the following combination as a highly effective stimulant and antiseptic for the scalp :

<sup>1</sup> For an admirable review of this question, see article by Leslie Roberts, in the Brit. Jour. Dermatology, June, 1897.

<sup>2</sup> Brit. Jour. Derm., Feb., 1897.



R.	Acidi salicylici,	gr. xv.
	Resorcini,	℥ss.
	Tr. cantharidis,	℥ss.
	Tr. capsici,	℥j.
	Saponin.,	℥j.
	Lanolini,	℥j.
	Aquam rosam,	ad ℥x. M.

Another formula given by the same writer is made thus :

R.	Tr. cantharidis,	℥xiv.
	Tr. cinchonæ,	℥ij.
	Tr. benzoin.,	℥vj.
	Spt. lavandulæ,	℥jss.
	Olei ricini,	℥ij.
	Alcoholis,	q. s. ad ℥x. M.
R.	Sulphuris præcip.,	℥j.
	Vaselini,	℥j.
	Olei limonis,	q. s. M.
S.	Rub in thoroughly every night.	

Since the hypodermic injection of pilocarpine has been of service in a few cases, there would be no objection to its use, although my personal experience with the drug has not been at all satisfactory.

The various forms of symptomatic alopecia must be treated according to the indications presented by the primary affection. The acute loss of hair, *defluvium capillorum*, following fevers tends to spontaneous recovery. Shaving the scalp, as often advised by wig-makers, is unnecessary, and, I think, harmful. If the patient insists upon something being done, any of the local stimulating preparations may be prescribed. In syphilitic alopecia, besides the constitutional treatment, recourse may be had to the daily inunction of a five per cent. oleate of mercury or the application of a bichloride of mercury lotion.

In alopecia pityrodes, as in most diseases with a bad prognosis, the number of remedies proposed is very large. The general indication is for stimulating applications.

In order to cleanse the scalp of dandruff the parts are



to be shampooed thoroughly with the tincture of green soap.<sup>1</sup>

R.	Saponis olivæ præp.,	℥iv.	
	Spt. odorati,	℥iv.	M.
S.	Shampoo.		

A tablespoonful of this mixture is poured upon the head and immediately afterward a teacupful of lukewarm water; this results in a copious lather with which the scalp is energetically shampooed; then the lather is washed out with at least a pitcherful of warm water.

Every night the sulphur salve mentioned above, to which a scruple of salicylic acid may be added, is thoroughly worked into the scalp. Usually in five days the shampooing should be repeated. In my judgment there is no pilary stimulant so useful as sulphur, and under the plan of treatment just outlined, and adhered to for months, I have seen alopecia pityrodes very much benefited. A formula recommended by Lassar containing pilocarpine is very valuable, but it is difficult to prepare properly and has the disadvantage of being very costly.

R.	Pilocarpinæ hydrochlor.,	gr. xvij.
	Quiniæ hydrochlor.,	℥ij.
	Sulphuris præcipitati,	℥jss.
	Balsam. Peruvianæ,	gr. clxxx.
	Medul bovin.,	℥ij. M.

If, for any reason, salves are not indicated, although that form of preparation gives the best results, recourse may be had to lotions. Montgomery recommends a bi-chloride lotion.

R.	Hydrarg. bichloridi,	gr. iv.
	Alcoholis,	
	Aquæ destillatæ,	āā ℥ij. M.

S. Apply by parting the hair, and rubbing well into the scalp every day or second day.

<sup>1</sup> I always employ Bagoë's prepared olive soap, as first suggested by Fox. The *sapo viridis* of the shops is a much inferior article, and Bagoë's can be substituted for it with advantage where green soap is indicated.



R.	Acidi carbolici,	℥j.
	Olei limonis,	℥jss.
	Glycerini,	℥ij.
	Spt. odorati,	q. s. ad ℥ij.
		M.

S. Apply to scalp with a medicine dropper, and then brush in thoroughly.

R.	Chloral. hydratis,	℥iij.	
	Alcoholis,	℥ss.	
	Glycerini,	℥ij.	
	Aquam rosam,	ad ℥vj.	M.
S.	Rub in thoroughly night and morning.		

Ihle has employed resorcin with good effect:

R.	Resorcin. pur.,	grs. xlviij.
	Olei ricini,	ʒviij.
	Spt. vini,	ʒiiij.
	Balsam. Peruvianæ,	℥v. M.

S. Apply at night by means of a medicine dropper, and then rub vigorously with a flannel rag.

Bronson's pomade is also serviceable :

R.	Hydrargyri ammoniati,	℥j.	
	Hydrargyri chloridi mitis,	℥ij.	
	Vaselini,	℥j.	M.
S.	Apply once or twice daily.		



PROGNOSIS. The prognosis of the various forms of baldness will naturally depend upon the character of the predisposing or exciting causes back of them. The baldness resulting from local diseases of the scalp of a superficial character, *e. g.*, eczema and erysipelas, is always recovered from, while deep-seated processes, where ulceration and consequent scarring occur, leave permanent alopecia in their wake. The acute loss of hair following fevers, etc., is usually only temporary. The outlook in the idiopathic form of premature alopecia is always gloomy. Much can be done for alopecia pityrodes if the case is seen in the first stage of the disorder, before the scalp has become bald and adherent; but even then the utmost fidelity to instructions must be insisted upon, and the patient must be plainly told that time is an important element in the treatment.

### ALOPECIA AREATA.

In this peculiar and striking form of alopecia the hair falls out more or less suddenly, exposing to view one or several circumscribed, circular patches that are entirely bald. The scalp is the part usually involved, but other hairy regions, such as the beard, eyebrows, etc., may be implicated, and, as will be seen presently, the whole body may be divested of its hairy growth. Sometimes the disease is ushered in by certain premonitory symptoms, either in the shape of a severe persistent or periodic headache, or there are present considerable burning and localized pruritus. However, these antecedent symptoms and sensations are not apparent in the majority of attacks, and most patients are otherwise in the enjoyment of good health.

In most instances the denuded areas are white, ivory-like and apparently depressed; in an early stage of the disorder they may be slightly hyperæmic. The sensibility of the affected patches is considerably lessened. There may be one or several patches present, varying in extent from a silver quarter of a dollar to the size of the palm.



At the periphery of an extending patch the hairs are short and easily extracted; or at an early period of the disease the whole affected area may be covered with these short hairs, which soon, however, drop out. According to Robinson the shape of a patch is significant; owing to its method of spreading by peripheral extension, it is usually circular or nearly so, but may be oval. This same observer states that if no downy hairs appear after several weeks it may be concluded that the follicle has been destroyed and permanent alopecia will result. When recovery is about to set in, fine wooly hairs will first make their appearance, which in turn will likely fall out, to be succeeded by a still stronger growth of light hair, that gradually becomes normal in color and caliber. I have seen the hair come in quite gray and so remain. Relapses are more frequent than is commonly believed. One of my patients had an attack every spring for three or four years, evidently the result of severe training for boat-racing.

In the form of the disease properly called malignant alopecia areata the whole hairy system may be involved, as, for example, the hairy scalp, beard, eyebrows, eyelashes, pubic hairs and even the hairs of the extremities.

The disease is comparatively common, its statistical frequency in England being two per cent. of all cases of skin disease, three per cent. in France and about one-half per cent. in Germany and America. Sex has no particular influence in its etiology, but it is commoner among the young than the old, the greater number of cases occurring before the fortieth year.

While it is a common experience that cases of alopecia areata are generally limited to a single member of a family, even where the opportunities for contagion are of the best, it is nevertheless true that many epidemics of a disease exactly resembling it in clinical features have been observed. The preponderance of opinion to-day is undoubtedly in favor of the parasitic theory. It would hardly be profitable to recall all the researches in this direction—



they have been contradictory and have lacked confirmation. Very recently Sabouraud<sup>1</sup> has declared that alopecia areata and common alopecia are due to the same cause, a manifestation of seborrhœa.

The oily secretion washed in ether and stained by the Gram method exhibits numbers of a short bacillus that may reach the size of a  $\mu$ . It is always found in the upper part of the hair follicle between its opening and that of its sebaceous apparatus. A cocoon of horny and fatty matter occurs in this situation which contains the bacillary colony in a pure state. This bacillus is the same as that found in the affected patches of alopecia areata. He thinks that alopecia areata is an acute form of oily seborrhœa with definite localization.

Sabouraud has succeeded in producing characteristic areas on animals with pure cultures, from pelade but, strange to relate, specimens obtained from oily seborrhœa cause no such results.

Unna<sup>2</sup> sums up this vexed question very happily in declaring that there is no longer any doubt that in certain streaked-formed alopecias limited to nerve regions, or appearing after traumata, neuralgia and other nervous affections, we have true neurotic alopecia, while typical alopecia areata is more and more certainly a contagious affection. But whether he and other competent microscopists will confirm the observations of the French observer remains to be seen.

DIAGNOSIS. It would be possible to confound alopecia areata with tinea tonsurans; but the course and clinical history of the two affections are quite different, and in case of doubt a microscopic examination of the hairs would settle the question. In adults the differential diagnosis between the two diseases could hardly arise, since grown people usually do not suffer from ringworm of the scalp. Folliculitis decalvans, with its minute abscesses pierced by

<sup>1</sup> See abstract in Jour. Cutan. Dis., June, 1897.

<sup>2</sup> Histopathology of Diseases of the Skin. Translated by Norman Walker, Edin., 1896.



a hair, followed by irregular, smooth, white, depressed scars, should not be confounded with the very different lesions of alopecia areata.

TREATMENT. Internally, tonics are sometimes demanded, particularly arsenic and iron, but the local management is of more importance. Strong remedies are generally indicated from the beginning. My usual plan is to blister the patches every two weeks with acetic cantharidal collodion or canthos after thorough washing with soap and water, and in the intervals to rub in morning and evening a lotion consisting of equal parts of tincture of cantharides and glycerine. If there are several patches, and of large extent, it is safest to apply the vesicant to one or two places only at a time. After weeks or months, as the case may be, the scalp begins to assume its normal appearance, and more downy hairs begin to appear, which gradually reach a normal caliber. Numerous other remedies have been proposed. The following applications are to be noted :

R.	Chrysarobini,	gr. xxx.
	Vaselini,	℥j. M.
R.	Olei amygdalæ dulcis,	℥j.
	Liq. ammoniæ fort.,	℥j.
	Spt. rosmarini,	℥v.
	Olei limonis,	℥j. M.

An ointment of one scruple of salicylic acid, two drachms of sulphur and one ounce of vaseline is also valuable and may take the place of the lotion of cantharides and glycerine mentioned above. Applications of carbolic and trichloroacetic acids may be tried in obstinate cases.

Sabouraud blisters the patches and paints the raw surfaces with a solution of nitrate of silver (1-15).

Horand<sup>1</sup> has found croton oil the most efficacious drug, and he does not think it dangerous.

PROGNOSIS. The prognosis in the mild form of alopecia areata is generally favorable, especially in young people. Recovery takes place in most cases in about three

<sup>1</sup> Annales de Derm. et de Syph., Aug.-Sept., 1894.



or four months ; sometimes, however, years may elapse before a permanent regrowth of hair occurs. I have never seen a favorable result in but one case of the malignant variety of the disease, and that was in the person of a boy of fourteen years.

### FOLLICULITIS DECALVANS.

During the past several years dermatological writers, especially in France, have described certain classes of cases that have in common inflammatory changes in and about the hair follicle, and that finally result in permanent loss of hair and the presence of scars, and exhibit a general tendency to agmination. The regions involved are prominently the hairy scalp and contiguous parts, the beard and less frequently other portions of the body. The following are some of the descriptive titles that have been employed : Folliculite épilante, acne dépilante cicatricielle, acne décalvante, lupoid sycosis, ulerythema sycosiforme, folliculites et périfolliculites décalvantes agminées, etc. It would be rash to say that these various disorders are identical etiologically and pathologically, but at least they all bear a clinical resemblance. As types of these affections several of the more well-defined will now be described in brief.<sup>1</sup>

*Simple Folliculitis Decalvans* or *False Alopecia areata* begins as a folliculitis or perifolliculitis, but the inflammatory symptoms are slight, consisting of some swelling and redness about the hair follicles. The hairs fall out readily and are not replaced, and when this occurs the inflammation subsides, but leaves behind atrophy of the papillæ and scalp. There is no pustulation. The patches extend irregularly, and not by the gradual increase in area of the round or oval patches as seen in true alopecia areata.

*Quinquaud's Disease* usually attacks the scalp, but also the beard, axillæ or pubic region may be the seat of the disorder. In these cases a small pin-head-sized pustule is

<sup>1</sup> I am especially indebted to A. R. Robinson's article on Folliculitis Decalvans in Morrow's System.



pierced by a hair, the miliary abscess soon causing loss of the hair and destruction of the follicle. The lesions appear in successive crops, but are few in number and isolated. The resulting atrophic patches are irregular in outline, about the size of a twenty-five-cent piece, and scattered here and there over the scalp.

*Ulergthema sycosiforme* of Unna, as described in his own words,<sup>1</sup> begins in the beard or the temporal region with flat, elevated (?) sharply-margined erythematous spots, on which appear superficial vesicles, crusts and scales. It extends serpiginously with red, slightly elevated borders, following the course of the beard, and also attacking the region of the cilia and supercilia.

It is very chronic, and eventually leads to the formation of hairless, atrophic surfaces. The addition of an impetigo may give the disorder the appearance of a cocco-genic sycosis. The atrophy, according to Unna, is never the result of suppuration, and the disappearance of the hair is merely a manifestation of the atrophy of the whole epithelium.

The treatment of these various disorders has not been satisfactorily worked out—in fact, for the most part is unavailing—but on the whole is perhaps in the direction of parasitocides and antiseptics. In the disease bearing his name, Quinquaud prescribes thorough ablution with soap and water, and the daily application of a mercurial lotion, viz.:

R.	Hydrarg. bichloridi,	gr. vj.
	Hydrarg. biniodidi,	gr. j.
	Alcoholis,	℥vj.
	Aq. destillatæ,	℥vjss. M.

## DERMATITIS PAPILLARIS CAPILLITII.

Under this title Kaposi first called attention to a rare disease that begins as small pin-head-sized reddish papules that are at first discrete, but afterwards become confluent, and form raspberry-like growths that are very vascular,

<sup>1</sup> Histopathology of Diseases of the Skin.



crusted, and exude a foul secretion. Keloidal patches finally develop, from which the hair is absent or projects in tufts. The hairs are extracted with difficulty, are readily broken and have a twisted appearance. Small pustules appear here and there. Kaposi declares it has no relationship to syphilis and is, moreover, not a sycosis, but is an idiopathic inflammatory affection. Robinson, however, does not consider it a special disease, and Brocq classes it with other types of folliculitis decalvans. The treatment is by thorough destruction with caustics or the galvano-cautery, or else by excision with the knife. The disease usually occurs about the nape of the neck, in the short hairs, but also occasionally on the scalp.

#### ULERYTHEMA OPHRYOGENES.

This affection was first described by Taenzer in Unna's clinic. It attacks by preference the eyebrows, extends over the neighboring parts of the forehead and cheeks to the neck and appears again on the extensor surfaces of the upper arms. In certain severe cases it travels from the forehead to the hairy scalp. In the lighter form the condition is a mild erythema, presenting at the mouths of the follicles minute horny plugs. The hairs are broken off close above the surface, and are unusually fine or invisible. After many years follicular and interfollicular atrophy supervene in the shape of small scar-like pits, which exhibit a marked contrast to the surrounding congestion. The outer part of the eyebrows completely disappears.

#### CONGLOMERATE SUPPURATIVE FOLLICULITIS.

Leloir,<sup>1</sup> in 1884, under this title called attention to a form of suppurative inflammation of the hair follicles and sebaceous glands. The disorder commonly has its seat on the backs of the hands and buttocks, although other parts of the body are not altogether exempt. The simple or benign form is characterized by a somewhat rounded or oval, well-defined elevation varying in size from a silver

<sup>1</sup> Ann. de Derm. et de Syph., Vol. V., p. 437. 1884.



dime to a silver dollar, but sometimes larger or smaller, and of a reddish or purplish color. The surface is smooth or slightly mammilated, and sprinkled over with a number of sieve-like openings. The mouths of some of these openings may be occupied by unruptured pustules, or hard plugs of inspissated secretion, or pressure over the lesion will cause drops of pus or sero-pus to exude. Other more profound forms of the disease occur, the phlegmonous or carbuncular, in which evidences of inflammation and supuration are more evident.

The patches are usually solitary, but there may be two or more present. Constitutional symptoms are absent, and locally only slight itching and burning. The hairs are readily removed and are unaffected. The disease runs an acute course, occupying about a week in developing, after which it undergoes little change for a week or two, and, if successfully treated, retrogresses in the course of another fortnight. Microscopically Leloir found micrococci and zoöglea masses in the pus, but inoculation experiments were negative.

The treatment is entirely local, consisting of daily expression of the purulent secretion, cleanliness and the application of a simple antiseptic salve.

With their usual genius for refinements in nomenclature, a number of other varieties of this malady have been described by the French, some undoubtedly being modifications of the ordinary forms, and others acknowledging entirely different causations, parasitic, medicinal, etc.

Hartzell's<sup>1</sup> case of agminate folliculitis due to the invasion of the trichophyton or some similar fungus may be referred to in this place.

### SYCOSIS.

*Sycosis non-parasitica, mentagra, folliculitis barbæ*, is an acute or chronic inflammatory disease affecting the hair follicles, particularly of the beard, due to pus infection, and characterized by papules, pustules and tubercles per-

Jour. Cutan. and Genito-urin. Dis., Nov., 1895.



forated by hairs, together with infiltration of the skin and crusting.

It was formerly the custom to describe two forms of sycosis, the one parasitic and the other non-parasitic, the parasitic form being due to the inoculation of the fungus of ringworm. The bacteriological researches of recent years have shown that both disorders are parasitic, inasmuch as the affection now under consideration is in all probability also the result of infection with micro-organisms, the staphylococcus aureus or albus or other pyophoric germs. Unna suggests that the word sycosis being retained, the one be called "coccogenic sycosis" and the other "hyphogenic sycosis;" and for still another clinical form the term "bacillogenic sycosis" may be applied. While these names have a distinct etiological value, it is likely that the expression sycosis will continue to be used for the old, so-called, non-parasitic form, while *tinæ barbæ*, or ringworm of the beard, will be employed for the hyphogenic variety.

Sycosis is mostly developed on the bearded portion of the face, but it may be found on other parts of the body supplied with hair, *e. g.*, the eyebrows, axillæ, pubes, the vibrissæ of the nasal mucous membrane, etc.; even on the hairy part of the face it may be limited to the upper lip, or to small patches elsewhere. The disease may commence by the appearance of a few papules and pustules perforated by hairs, there being present at the same time a certain amount of heat and swelling of the parts. At other times an erythematous or moist eczema has preceded the eruption. Sycosis of the upper lip is commonly set up by the discharge from a chronic nasal catarrh. When the affection sets in acutely the local symptoms may be quite severe, consisting of great heat of the surface, considerable pain, tumefaction of the skin, and even enlargement of the contiguous lymphatic glands. The lesions in the beginning of acute outbreaks usually appear in considerable numbers and close together, but in cases that have begun insidiously they are not so numerous and are discrete.



In regions where the beard is thick, and which have been repeatedly attacked, considerable infiltrations may be observed, involving wide areas. It does not follow, however, that the disease always relapses in the same locality. The acneiform papules and tubercles soon become converted into pustules. The characteristic feature of sycosis is that each papule, tubercle and pustule is pierced by a hair. During the papular stage extraction of the hair causes considerable pain, but afterwards, when suppuration has occurred, they may be readily and painlessly plucked from the follicle. The pus dries up into thin brownish-yellow crusts, which upon removal will exhibit hairs seated in a shallow pit bathed in pus. More or less scarring and permanent alopecia results, and sometimes, in severe cases, the destruction of the tissues and glandular apparatus is very extensive. The diseased process is strictly limited to regions covered by hair, and does not step out of those boundaries.

Sycosis is a chronic affection, usually lasting months or even years, being kept up by relapses at irregular periods. According to Robinson sycosis is primarily a perifollicular inflammation, the first changes occurring around the follicle in the perifollicular region. Later the follicle and its sheath become implicated.

Robinson has noted the following variations in sycosis when occupying special situations: Over the eyebrows it may exist independently or in connection with a blepharoadenitis or an eczema or sycosis of the face; on the eyelid or axillæ or over the pubes there is usually a sycosis of the same locality. Scratching and free sweating are factors in its production under the armpits, and it is often secondary to scratching upon the pubes and labia. The same authority says that a widespread sycosis is rare upon the scalp, and is usually associated with eczema. I have at present, however, two cases of disseminated folliculitis of the scalp in brothers, aged seven and five years, in which a searching bacteriological examination shows nothing but pus-cocci. Lupoid sycosis (Milton) is consid-



ered by some authors as identical with Unna's ulerythema sycosiforme, but Unna himself does not regard this latter affection as a coccogenic sycosis at all, but as a true ulerythema (q. v.).

It is a commonly accepted opinion that sycosis is the result, directly or indirectly, of the invasion of the follicle by pus organisms, the same pyococci that cause furuncle and impetigo (Bockhart). Robinson states that his own investigations demonstrated the presence of the staphylococcus pyogenes aureus as well as cereus et albus; but he declares, further, that the direct exciting agent may not in all cases be a pus organism, but some of the agents that produce ordinary papular or vesicular eczema, and pus organisms finding a favorable soil form a complicating factor. It is more than likely, as has also been urged, that there exists a number of predisposing conditions that render the soil more susceptible to infection, such as nutritive disturbances of one sort or another, special cutaneous vulnerability, acrid discharges, as from the nose, etc. It was formerly declared that sycosis was not contagious, but, aside from theoretical preconceptions, I am quite confident that the disease is often conveyed through the medium of infected brushes, strops, towels and fingers in barber shops.

**DIAGNOSIS.** Sycosis must not be confounded with eczema and tinea sycosis. In the first place, in eczema, the disease is not confined to the hairy parts, as it is in sycosis, but other portions of the integument are apt to be involved; in eczema the lesions are not discrete, and are not invariably pierced by hairs. Pustular eczema of the beard is attended by more and thicker crusting than is seen in sycosis, and upon removal of the crusts there are not to be seen the shallow pits perforated by hairs that are to be observed in sycosis. At times it must be confessed a diagnosis between eczema and sycosis is impossible, but the recognition of a folliculitis, whether eczematous or not, is all that is practically necessary.

Although sycosis parasitica, or ringworm of the beard,



is a comparatively rare affection it is sufficiently common to render the differential diagnosis a matter of much practical importance. Whereas sycosis begins usually with papular lesions that become pustular, ringworm, or tinea sycosis, commences as a scaly circumscribed patch; in sycosis the hair is primarily involved; in tinea sycosis secondarily. The eruption in non-parasitic sycosis is made up of papules, pustules and tubercles, each perforated by a hair; the eruption of parasitic sycosis consists of large tubercles and deeply-seated nodules, which may be studded with tufts of hair. The hairs in ringworm are brittle, broken off, opaque and easily epilated; in the beginning, in sycosis, the nutrition of the hairs is not so much affected, and they are extracted with difficulty. Very often a person having ringworm of the beard will show it elsewhere on the body. Finally, in doubtful cases, the microscope will settle the question.

Unna says of his ulerythema sycosiforme that an impetiginous complication may make it resemble sycosis, but that the atrophy of the skin is never a result of suppuration, and the baldness is only a result of the atrophy of the epithelium as a whole; therefore, there are no depressions on the scarred surface that correspond to the follicles. Moreover, the mode of attack and evolution of the disease differs from coccogenic sycosis.

TREATMENT. Internal treatment, unless obviously demanded by other considerations, is altogether unnecessary. If a nasal discharge is responsible for a sycosis of the upper lip, it will be necessary to stop the discharge before the sycosis can be cured. In the acute stages of the disease soothing measures are required.

R.	Olei amygdalæ dulcis,	℥ij.	
	Liq. calcis,	℥ij.	
	Acidi carbolic,	℥ix.	M.

R.	Zinci oxidi,	℥ss.	
	Pulv. acaciæ,	℥j.	
	Emuls. amygdalæ,	℥ij.	
	Aquæ rosæ,	℥iv.	M.

q. s. ad



Olive or almond oil, lead lotion and the black wash, followed by zinc ointment, are all useful for the purpose. The hair should be closely cut, and if crusts have formed they must be first removed by inunctions with oil or hot poultices before the appropriate remedies are applied. Usually, when the patient comes under the care of a dermatologist, the disorder has reached a more chronic stage. It is at this time that shaving and epilation become indispensable parts of the treatment.

The beard should be shaved at least every second day, the crusts having been first removed, and the hairs epilated from all pustules. The patient will always demur to the shaving, having an idea, also shared by the barber, that the operation is impossible. A little firmness on the part of the physician will usually carry the point. After shaving, or after epilation, the skin should be fomented for a while with very hot water to relieve the congestion, and while this is being accomplished a soothing and somewhat astringent ointment, such as the *unguentum vaselini plumbicum*, should be applied spread on strips of cotton and neatly bound on the affected surface. Robinson thinks well of the following combination :

℞.	Ung. diachylon,	
	Ung. zinci oxidi,	āā ℥jss.
	Ung. hydrarg. ammon. chlor.,	℥iij.
	Bismuthi subnitratis,	℥jss. M.

When the disease has become veritably chronic more energetic measures still are advisable. While in the acute stage epilation should be practiced only on hairs connected with pustules, it is now proper to pull them both from papules and pustules. To relieve the infiltration of the skin rubbing with green soap, or the tincture of green soap, as in eczema, immediately followed by diachylon ointment, gives good results. Sulphur and the various mercurial preparations are also to be recommended. The following preparation, conjoined with shaving and epilation, has served a good purpose :







## DISEASES OF THE NAILS.

## ONYCHAUXIS.

Onychauxis is synonymous with increased growth or hypertrophy of the nails. Strictly speaking, the excessive accumulation of horny substance, with the accompanying deformities of the nail, are not hypertrophies, but keratomata of the nail bed, combined with keratoid hypertrophy of the nail plate. (Unna.) Onychauxis may exist in many degrees and varieties of thickness and deformity, a simple keratoma without other change or, as generally happens, associated with alteration in texture, color and shape. When the growth is chiefly forward the nail becomes bent and twisted sometimes spirally, like a ram's horn. In this condition, known as onychogryphosis, the nail is much thickened, strongly ridged both transversely and longitudinally, shining, but more or less discolored, of a yellow or brownish hue. Underneath, upon the nail bed, there is an accumulation of softened, often evil-smelling epithelium. Such nails may be several inches in length, and of great thickness and very hard. Onychauxis may occur in the nails of the fingers or toes. It is generally limited to the toes, especially the great toe, and is rarely seen on the fingers. The process is a non-inflammatory one, though the encroachment of the greatly thickened nail upon the soft parts laterally may occasionally set up a paronychia. The affection is induced by purely mechanical causes, as various traumatisms, especially ill-fitting shoes. Gross neglect of the care of the nails, whereby irritative processes, with consecutive hypertrophy, are induced, is not an uncommon cause. In many cases met with in practice various symptomatic factors are to be recognized. An hyperplasia of the nail cells occasionally occurs in connection with various affections of the nervous system, *e. g.*, chronic myelitis, neuralgia, etc.

Hypertrophy of the nail also accompanies psoriasis,



pityriasis rubra pilaris, eczema, ichthyosis, syphilis, and as a result of the invasion of the vegetable parasites.

The treatment resolves itself into the correction of the traumatic influences, that is to say the relief from pressure of ill-fitting shoes, cleanliness and care of the nails, appropriate internal medication where systemic diseases are at work, and the appropriate remedies where inflammatory diseases have excited hyperplasia. An important point is the protection of the soft parts.

Surgical procedures, even to the point of removal of the nail and scraping of the nail bed by means of the sharp spoon, are occasionally demanded.

### ONYCHIA.

This is a term used for inflammation of the matrix of the nail, whether idiopathic or secondary. The most frequent causes are trauma, syphilis, leprosy, eczema, psoriasis, tuberculosis and ringworm. The disorder manifests itself by swelling and pain, and in severe cases the extremity of the involved member becomes livid and bulbous, and gradually the nail becomes detached at the sides, and exposes an ulcerated surface from which foul sanious matter escapes. Occasionally the inflammation is so severe as to be of a phlegmonous type, and then there is intense redness over the base of the nail, progressing to lividity, heat and throbbing pain, the nail itself is discolored by the inflammatory effusion beneath it; suppuration ensues with sanguino-purulent discharge; the nail is lifted from its bed, becoming thickened, opaque and discolored, and is often completely thrown off, exposing a sloughy, easily bleeding surface. This may gradually clear up and heal, and an imperfect nail replace the old, or the inflammation may spread to adjacent tissues and eventually the lymphatics, and the condition known as paronychia be produced.

Division of the nail is indicated in the earlier stages for the relief of the pain and tension, which is generally effected by this procedure. In the phlegmonous variety it is usually necessary to remove the nail, and then to dress



the parts with iodoform or powdered nitrate of lead. In the strumous and syphilitic appropriate internal treatment is required.

### PARONYCHIA.

Ingrowing toe nail is fully described in all surgical manuals, and we can here only speak of the most common form, namely, ingrowing toe nail of the great toe. The great toe is by far the most frequently affected and that particularly on its outer border. Traumatism is probably the only exciting cause. This is usually the result of ill-fitting shoes. According to Unna the pressure of the shoe displaces the long axis of the distal phalanx outwards. The nail plate is unable to accompany the phalanx in this movement, therefore must either grow over the edge or remain behind. When the latter takes place a very acute angle is formed between the plane of the nail bed and the nail plate. The skin along the edge of the nail plate being very resistant helps to maintain this sharp angle, and the nail therefore has only the one direction in which to grow, downwards. Permanent pressure is thus established and through the continued irritation ulceration and granulation are produced.

The treatment lies in the removal of the pressure by the wearing of properly fitting shoes, and when the condition is fully established the restoration of the axes of the nail bed and nail plate. This may be affected by introducing a wedge, of some not too readily yielding substance, as sponge, between the nail plate and nail furrow. Should ulceration and granulation be present the sponge wedge is saturated with a two per cent. alcoholic solution of nitrate of silver. This is repeated with increasing sized wedges until the nail plate and nail bed are once more parallel. Many methods have been suggested, but all fail at times, and only surgical procedures will give relief.

### ONYCHOMYCOSIS.

Onychomycosis is a disease of the nail produced by fungi. The fungi which invade the nail are the *tinea*



favosa (favus) and the tinea trichophytina (ringworm). One or more nails may be affected with these diseases, the disease beginning in the nail bed and affecting the matrix secondarily, only rarely. The nail becomes more or less thickened, its texture is less dense, the surface loses its lustre, discoloration of a dull yellowish hue ensues, and the surface may be more or less irregular from imperfect growth, and is furrowed and pitted in various ways. These conditions may also be seen in other diseases of the nails, as eczema, psoriasis and syphilis. Reference must be made to the fungus diseases of the skin for differentiation and treatment.

### ATROPHIA UNGUIUM.

Atrophy of the nail may be either a congenital or acquired condition. In the congenital form various grades of defective growth, even to entire absence of the nail, will be observed. The acquired atrophies of the nail result for the most part from general or local disturbances of nutrition, as, on the one hand, syphilis and cachectic states generally, and, on the other hand, changes consecutive to eczema, psoriasis, parasitic affections, etc. Traumatism of different kinds effect retrogressive degenerations in the nail plate. The most marked instance of thinning and softening is seen in pemphigus foliaceus. Several neurotic conditions, *e. g.*, neuritis, leprosy and syphilis of the nervous system are not infrequent causes of atrophy. The nails may become thinned and softened, or brittle and crumbling. Furrowing, discoloration and a pitted or worm-eaten appearance and white spots are also common symptoms. The treatment will depend upon a due appreciation of etiological factors and such local measures as are best adapted to the case under consideration.

### LEUCOPATHIA UNGUIUM.

Leucopathia unguium, or white nails, is a term used to describe the white spots or bands commonly seen upon the nails. Very exceptionally the whole of the nail may be of



a white color. White spots, to which the ancients gave the name *flores unguium*, known vulgarly as "gift-spots" or "white lies," are of very frequent occurrence in the nails of young people. They are partial degenerations or incomplete cornification, the result of numerous small injuries of the matrix. These spots are quite irregularly distributed, unlike other white spots occurring spontaneously and described under the term *leuconychia*. In this condition there is an abnormal softness of the nail and a condition of swelling of the nail cells by which they become opaque. They may suddenly dry up and the nail become transparent unless the entrance of air induce complete refraction and a chalky color by reflected light. This secondary condition occurs first in points and later in the center of the nail bed, in streaks and bands.

### SCLERONYCHIA.

Scleronychia is an expression applied by Unna to a condition of the nails allied to *leuconychia* and bearing a certain superficial resemblance to *eczema* of the nails. This condition appears simultaneously upon all the nails of the fingers and sometimes on those of the toes also. Instead of the nails being abnormally soft, as in *leuconychia*, they appear to be of normal or even abnormal hardness. The nails are, from behind forward, thickened, inelastic, hard, rough, opaque and have a yellowish-gray color. The lunula is no longer marked. Longitudinal furrows often occur, while in other cases the whole surface is covered with protuberances and depressions, and the anterior border is rough and irregular. There appears to be an increase in the normal air bubbles. The condition seems to indicate some unknown specific change in the nail cells and some specific affection of the nail matrix, and possibly is only a manifestation of a general anomaly of cornification of the body which has reached such a degree on the nails as to be evident, and thus only recognized there.



**SPOON NAIL.**

This designation is used by Crocker to describe a condition of the nail in which the latter is considerably thinned and of a concave form from side to side. There is occasionally associated an antero-posterior curvature lesser in degree than the lateral, and the edges of the nail are everted. The nails of the toes seem to be exempt. The trouble begins in the nail of one finger and gradually extends to the others. It has been observed in connection with some wasting diseases, but in most instances the etiology is obscure.

**REEDY NAILS.**

The term is applied to that condition of the nails where the normal longitudinal striæ become much more prominent, the condition resulting from an atrophy of the intermediate substance. The disease is very common in aged persons and those too in whom there are no evidences of gout, contrary to Fothergill's opinion that such a condition was symptomatic of gout.







## CLASS VIII.—PARASITIC DISEASES.

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### VEGETABLE PARASITIC AFFECTIONS.

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#### TINEA.

THE term tinea is used generically for the class of cutaneous affections due to the presence of certain vegetable organisms belonging to the fungus family, namely: *tinea favosa*, *tinea circinata*, *tinea tonsurans*, *tinea sycosis* and *tinea versicolor*.

#### TINEA FAVOSA.

*Tinea favosa*, or favus, is a contagious disease, produced by the achorion *Schönleinii*, which is usually, although not invariably, confined to the scalp, and presents peculiar, variously sized, sulphur-yellow, cup-like crusts pierced by hairs.

It is comparatively rare in this country. My statistics show but thirteen examples in a total of 6,724 cases of all forms of skin disease. Nearly all of my cases were poor children, who had brought the disease with them from Europe. The disease may attack any part of the body, even the mucous membranes of the stomach and bowels, but it has a predilection for the scalp. In the first stages, which, however, the physician rarely witnesses, there arise erythematous patches attended by some itching and desquamation, and after a season there will develop the characteristic sulphur-yellow, umbilicated favus cups. As ordinarily encountered on the scalp a somewhat complex clinical picture is presented, in which the observer will notice the lustreless state of the hairs, the masses of yellow crusts, irregular areas of baldness, and a peculiar musty



odor arising from the diseased surface. Studied somewhat more in detail the following features are to be noted. In the beginning the favus crusts, which lie beneath the epidermis, are pin head in size, pierced by a hair, and of sulphur-yellow color; they grow quickly, however, and soon attain the dimensions of a split pea; at the same time, according to Kaposi, the peripheral portion of the epidermis projects, but the part surrounding the hair remains on a level or else sinks slightly, thus producing the likeness to a little cup. The developed crust rises a line or more above the skin, is round or oval in outline and is made up of several concentrically disposed strata. They are very friable, being readily crumbled between the fingers.

When, at an early stage, a crust is picked off the scalp, a slight depression, which soon fills out, may be observed; but later the underlying part will be found dry and atrophied, or sometimes the seat of suppuration. The lesions are at first discrete, but, as a rule, they finally run together to form dirty-grayish, mortar-like masses with a more or less irregular outline.

The hair becomes dry, brittle and without lustre as a result of the parasitic invasion, the follicles are eventually destroyed, and permanent alopecia results. Occasionally the disease is met with on the general surface of the body—*tinea favosa epidermidis*,<sup>1</sup> and the parasite also invades the nails.

Favus occurs mostly among the poor and ill-nourished, and attacks children more frequently than adults. It also is found on the lower animals, mice, cats, etc., and the contagion in some instances proceeds from these sources. While favus is a contagious disease, certain favorable conditions of soil seem to be required for its ready reception. The direct cause of favus is the presence of the vegetable parasite known as the achorion Schönleinii. The fungus invades the epidermis, especially the horny layer, the hair follicles and the hair. For microscopical examination a small bit of the crust may be prepared with a little liquor

<sup>1</sup>See illustration in McCall Anderson's Diseases of the Skin, p. 494.



potassæ, and subjected to a power of from three hundred to five hundred diameters. The favus cups consist almost entirely of the achorion. This fungus is made up of mycelium and spores. The mycelium consists of flat, narrow threads that branch and anastomose with each other in various directions, and are of a pale gray or greenish color. The spores are small, and of different forms, such as round, oval, flask-like or dumb-bell-shaped, and are abundantly found in the meshes of the mycelium. It has been claimed by some observers (Quincke, Unna) that there are different forms of the fungus in some instances corresponding to different varieties of the disease; but this opinion is by no means general. Kaposi, for example, declares that unbiased clinical observers have never doubted the unity of favus as a morbid process.<sup>1</sup>

**DIAGNOSIS.** Favus is usually readily recognized. The yellow masses, made up of saucer-like crusts, the irregular bald areas, and the stale odor are characteristic. In cases just beginning, or in cases where the favus crusts have run together to form mortary masses, it is sometimes necessary to suspend judgment for a while. It is essential to distinguish favus from ringworm, eczema, psoriasis, seborrhœa and lupus erythematosus. In all suspicious cases the microscope should be appealed to, which, taken in connection with the clinical history, will generally establish the diagnosis.

**TREATMENT.** The treatment of favus is entirely local, although cod-liver oil and iron, together with good food, will not come amiss when required. When the disease occupies the scalp the first thing to be attended to is the removal of the crusts. After clipping the hair short, the parts may be soaked in oil or poulticed, and subsequently washed with soap and hot water. The crusts having been removed, the next step is the extraction of the hairs. Various plans of epilation have been suggested, but the simplest and surest is with the broad epilating forceps.<sup>2</sup>

<sup>1</sup> See especially Pick, *Archiv. f. Derm. u. Syph.*, Bd. xxiv., Hft. 1.

<sup>2</sup> For large surfaces Bulkley's epilating sticks may be used.



A little area may be attacked at a time, and the parasiticide applied at once. Among the antiparasitic remedies most employed are tar, sulphur, carbolic acid, salicylic acid, sulphurous acid and the mercurials. Bichloride of mercury dissolved in ether or alcohol has given fair results.

R. Hydrargyri bichloridi, gr. j-ij.  
Alcoholis, ʒj. M.

S. Apply immediately after epilation, and twice a day thereafter.

Jamieson states that he has used Ihle's paste without epilation with much satisfaction.

R. Resorcini, ʒj-ʒjss.  
Lanolini,  
Vaselini,  
Zinci oxidi,  
Pulv. amyli, āā ʒij. M.

The hair is kept short, the head washed daily with soft soap, and the paste applied immediately after the head is dry.

In the meantime, for the purpose of preventing the dissemination of the disease, the whole scalp should be treated with a saturated solution of boric acid or a carbolic acid lotion of the strength of two to four drachms to the pint. After a season the treatment may be suspended to judge of the results obtained. If the disorder reappears the same procedure must be repeated.

Zinsser advises the following measures: All crusts are removed and the hair is shaved. The head is covered with a compress steeped in a three per cent. solution of phenol, and on top of this a metallic Leiter's coil shaped to fit the head is applied, through which a continuous stream of water at a temperature of from 52-55° C. is passed. The apparatus is kept on all day, and the treatment should be continued for eight or nine days. He claims to have cured three out of every four cases in this way.



An old formula of Pirogoff's has been recently reintroduced :

R.	Sulphuris sublimati,	℥ss.
	Potassii carbonatis,	℥j.
	Picis liquidæ,	℥jss.
	Tr. iodi,	℥jss.
	Adipis,	℥iij. M.

The head is shaved and a cloth smeared with this salve is applied for twenty-four hours. At the end of this time the crusts are removed, and the scalp washed. The applications are repeated every twenty-four hours until active desquamation occurs, when inflammation is allayed by a soothing paste.

Epidermic favus should be treated by the usual parasitocides. Painting with tincture of iodine or the application of a weak bichloride solution dissolved in collodion is generally efficacious. In favus of the nail, in addition to the application of the parasiticide, the diseased portion should be pared away.

PROGNOSIS. Untreated the disease lasts for years, leaving in its wake marked deformity of the parts in the shape of scars and bald patches. Under the most favorable circumstances favus is an intractable disorder. A period of treatment averaging from four to twelve months may be expected, and even after an apparent cure the patient should be inspected from time to time to make sure of the permanency of the results.

### TINEA TRICHOPHYTINA.

Up to within a comparatively recent period it was believed that ringworm in its various manifestations was due to a special fungus, the trichophyton tonsurans, and that the clinical differences were, as Kaposi and some others still hold, the result of variations in regard to the luxuriance of its growth and the susceptibility of the skin, the point of attack, etc. It is impossible here to enter at all minutely into this question, but it suffices to say that since



Sabouraud's<sup>1</sup> researches in 1894 the plurality of the fungi in ringworm has been very generally admitted. He declares that the ringworm encountered in human subjects comprises two affections caused by fungi as distinct from each other in every way as those of favus or tinea versicolor. The following divisions are now usually recognized:

1. Tinea of Gruby and Sabouraud, or common tinea; tinea with small spores due to the *Microsporon Audouini*.

2. Trichophytic tinea, or tinea with large spores due to the various forms of *Trichophyton megalosporon*.

The following account, with additions from other sources, is condensed from Wickham's excellent presentation of the subject.<sup>2</sup>

### SMALL-SPORE TINEA.

1. The most frequent tinea is the small-spore due to the *M. Audouini*, of which perhaps there are several varieties. This is the ordinary ringworm of childhood, not often beginning before the age of eight years, and never after fourteen, and not observed at all after fifteen. It does not attack the adult scalp, never causes sycosis nor does it invade the nails. At times it is also seen on the glabrous skin of children and adults. This is regarded as the most contagious type of ringworm and the most rebellious to cure. The affected hairs are white or grayish and the bases of the stumps are surrounded by a powdery sheath. This sheath is found on the shaft of the hair both within the follicle and just after its emergence. At the level of the epidermis it spreads out to form a *circumpilar collar-ette*. These collarettes, lying close together, give the patches a powdery appearance. The hair treated<sup>3</sup> with

<sup>1</sup> Les Trichophyties Humaines, avec Atlas, Paris, 1894. Diagnostie et traitement de la pelade et des teignes de l'enfant, Paris, 1895. I have availed myself quite freely in this section of the several articles by Wickham and Fox and Blaxall in the British Journal of Dermatology, and also the practical work of Aldersmith on Ringworm, fourth edition, London, 1897, to which I am particularly indebted. Only an outline of the microscopical part of the subject can be given here.

<sup>2</sup> Brit. Jour. Derm., Oct., 1894.

<sup>3</sup> It is said that the mycelium can be demonstrated by allowing the stumps to soak some hours in cold liq. potassæ.



a sixty per cent. solution of potash, heated nearly up to boiling point, and not crushed, shows an immense quantity of very small spores that are perfectly round. They are not united in bands and chaplets, but the conidia lie one against the other in a mosaic. These spores are circumpilar and, if removed, the surface of the hair is seen to be eroded, with small cracks here and there in the upper portion. As the higher portions of the hair are examined the spore-sheath ceases gradually, but irregular groups of spores, with here and there single spores and scattered mycelial threads are noted. About the junction of the shaft with the bulbous portion a remarkable terminal fringe of long, plain, narrow, delicate, sometimes branched mycelial threads may be observed, which is regarded as quite characteristic (Fox and Blaxall). The threads extend up the hair shaft and parallel with it beneath the dense mosaic spore sheath, and terminate toward the bulb in somewhat swollen ovoid endings at a deeper level than the spores. According to Aldersmith, for ordinary purposes of diagnosis it is unnecessary to find the mycelial threads as the masses of small, circular, circumpilar conidia, compressed into a mosaic, are sufficiently characteristic, together with the eroded hair denuded of epithelium, and presenting cross fractures.<sup>1</sup>

### LARGE-SPORE *TINEA*.

2. The second group comprises the ringworms with large spores, the true trichophytosis of all sites, caused by diverse species of trichophyton fungus. This includes two distinct classes due to (*a*) *Trichophyton megalosporon endothrix* and (*b*) *Trichophyton megalosporon ectothrix*.

#### *Trichophyton Megalosporon Endothrix*

Is of apparently human origin, exists mostly on the scalps of children and produces on the adjacent skin transitory lesions that do not constitute true "herpes circinatus."

<sup>1</sup>See Adamson, Brit. Journ. Derm., Vol. VII., Nos. 7 and 8; and F. Taylor, Ibid., Vol. VIII., No. 4.



Two varieties of this tinea are recognized: (1) due to trichophyton with resistant mycelium, and (2) with fragile mycelium.

**Trichophyton Megalosporon Endothrix, Resistant.**

This is the commoner form. The fungus first invades the hair from the outside and sends filaments down the hair shaft; at a subsequent period the parasite grows rapidly inside the hair. The parasite appears as mycelial threads with large, almost square spores and of double outline. The threads constitute the bands that run up the hair from below upwards, parallel to its long axis. The microscopical diagnosis is made by observing the great size of the spores, the "ladder-like" bands of mycelial spores inside the hairs and the epithelium intact. It is distinguished from the fragile form by the bands of sporulated mycelium resisting the action of liquor potassæ, that is, not disintegrating, and not possessing the chaplet-like arrangement of the latter.

**Trichophyton Megalosporon Endothrix, Fragile.**

Aldersmith recommends that to get a good specimen the stump be removed by electrolysis. He states that mycelium and chains of spores may be discovered round the shaft of the hair, as in the resistant type, and also the fringe of mycelium near the bulb. The threads pass upwards closely packed in the stump, and are divided into many rows of mycelial spores, often filling up the hair substance, and giving the appearance of "fish roe," or a bag of nuts. When boiled these threads completely disintegrate. The microscopic diagnosis is based upon the large size of the spores, somewhat larger than in the resistant form, the presence of mycelial threads in chaplets, their intrapilar situation, and their fragility.

**Trichophyton Megalosporon Ectothrix.**

This tinea causes ringworm of the body, of the beard, kerion<sup>1</sup> and agminate folliculitis. It is of animal origin.

<sup>1</sup> This also occurs with the microsporon.



According to Sabouraud it is not one single tinea, but a large number of different varieties of trichophyton derived from different animals. Wickham states that this group has not been definitely elucidated; twenty different sorts are suspected up to date; five or six are well defined. The histological characters common to all are that the spores are more or less large, mycelium is very distinct, the situation is around the hair; there are no intrapilar parasites. Fox and Blaxall state that trichophyton megalosporon ectothrix or endo-ectothrix may be a better term, as the hair itself may be more profoundly implicated than was at first supposed; but that after all the location in its entirety must be considered.

With this brief and inadequate account of the different varieties of the so-called ringworm fungus, it will now be necessary to present the clinical aspects of the disorder.

### **Tinea Tonsurans.**

Since the demonstration of the plurality of the fungi in ringworm has been established, it has been shown that the clinical appearances will depend upon the source of the infection. In ringworm of the scalp due to the small-spore tinea (*Microsporon Audouini*) there may be one or several patches, varying in size, round or oval and distinctly circumscribed. Sometimes there is one large patch with outlying satellites. In young children there may be a hyperæmic ring at the circumference. The mouths of the follicles are sometimes slightly raised, making the lesion look like the skin of a plucked fowl. The patches are not bald, but covered with stumps about one-eighth inch in length, each stump being surrounded at its base by a whitish sheath or collarette, which, lying close together over the diseased areas, give the skin its powdery aspect. The hairs are pale and lustreless, usually lie all in one direction, and readily break off, and as the majority of hairs are affected the patch has the appearance of a cornfield covered with the stubble of broken, bent and frayed-out stalks. The patch or patches may be scaly or not, but



the skin is usually unaltered unless there is a complicating seborrhœa.

Aldersmith states that, quite rarely, he has seen the places get quite bald, even with club-shaped stumps, closely simulating alopecia areata.<sup>1</sup> Sometimes there is a certain amount of eczema with crusting of a seborrhœal type. Contrary to Sabouraud's original statement several authorities state that the small-spore tinea may cause pustules and even the kerion type. The microsporon may also produce small, scaly places on the body, that is the neck, face and shoulders, and also red, raised rings about three-quarters of an inch in diameter or even larger (Adamson).

Large-spore tinea (*Trichophyton megalosporon endothrix*, resistant) produces on the scalp one or many patches. The skin in the diseased areas is usually smooth and clean. The diseased areas are often smaller than in the microsporon variety, and there are many stumps disseminated among the unaffected hairs, together with black dots, but these latter are less common than in the fragile form. While lesions are comparatively frequent on the body, and also are sometimes observed on the attendants, this parasite does not attack the bearded face.

The trichophyton, with fragile mycelium, exhibits more or less numerous patches, the skin of which is clear and smooth, but there are many small places and isolated stumps and black dots. In some instances there are no definite patches, but stumps in groups and single stumps may be noted with close observation.

The megalosporon ectothrix produces, as a rule, single lesions, though from auto-inoculation others will form later on. The clinical characters are diverse, such as dermatitis, impetigo, folliculitis, discrete or conglomerate, kerion, etc. There may be swollen glands, and some febrile reaction. According to Fox and Blaxall the hairs are less eroded and broken up than in other forms, and it is some-

<sup>1</sup> I called attention to this condition in the first edition of this book. Adamson also mentions it.



times difficult to detect an obviously diseased stump, or even traces of the fungus.

Kerion is really an acute folliculitis in which arises a circumscribed boggy swelling studded over with gaping follicles that pour out a sticky, honey-like secretion. Suppuration is exceedingly rare, but the hairs fall out and leave exposed a red patch that after awhile becomes normal. Sabouraud holds that this condition is always due to the *M. ectothrix* fungus, but the English authorities state that it also occurs with the microsporon.<sup>1</sup>

**DIAGNOSIS.** The essential feature in the diagnosis of tinea tonsurans is the discovery of scaly, circular patches on the scalp in which the hairs are broken off, dry, brittle and variously distorted. Even in the disseminated cases the stumps are usually sufficiently characteristic. However, as all cases are unfortunately not typical, it will be found that the following diseases sometimes simulate ringworm; viz., eczema, seborrhœa, psoriasis, alopecia areata and certain pustular affections. In eczema the disease is not confined to margined patches, but is more scattered, there is more pruritus, and the hairs are not broken off as in tinea tonsurans. In psoriasis of the scalp there will often be found disseminated, circumscribed patches covered with scales, but these latter are much thicker and more abundant, and the hairs are unaffected; moreover, if the idea of psoriasis is entertained at all, search should be made on the elbows and knees for additional evidence of the disease. Seborrhœa does not occur in defined patches, the scales are greasy, and the hair, although perhaps thinned, is not broken and twisted. Ordinarily the scaly, stubbled appearance of the ringworm patch is quite distinct from the smooth white and hairless lesion of alopecia areata; but there are some cases of tinea tonsurans in which there is but little inflammatory reaction, and in many cases of alopecia areata one may discover fine hairs at the periphery of a patch; but these short, straight

<sup>1</sup> Granuloma trichophyticum Majocchi is said to differ from Kerion histologically, although due to the trichophyton.



stumps are in no way like the broken hairs in ringworm. Since we know that the fungus of ringworm may produce a variety of pustular ringworm, it is well in all suspicious cases to look for diseased stumps and to make the necessary microscopical examinations. It must again be mentioned that a patch of disease occurring on the scalp of an adult is presumptively not ringworm until we have been indubitably convinced to the contrary.

In all doubtful cases the microscope should be brought into requisition. For purposes of examination the scales or hairs may be moistened with liquor potassæ and observed with a power of from 300 to 500 diameters.

**TREATMENT.** The disease in the beginning, before the hairs have become seriously affected, is more easily manageable. In all cases, however, as a preliminary step, it is necessary to cut or shave the hair, and to clear it of scales by washing with hot water and soap, preferably the prepared olive soap already mentioned. When there are but few patches, especially with girls, it is only necessary to clip the hair for a space round about the affected area. To prevent dissemination of the disease to other parts the whole scalp may be sponged daily with a two per cent. solution of carbolic acid, a saturated solution of boracic acid, or, as recommended by Crocker, carbolized oil, one in twenty. Thin thinks well of a boracic acid ointment for this purpose. It seems to me that there is no objection to washing the scalp every few days with soap and hot water, although this practice is condemned by some practitioners. There is also considerable difference of opinion as to the value of epilation, and, so far as my own experience goes, I have got along just as well without it, but, at the same time, it must be admitted that the practice is insisted upon by physicians of the highest authority.

Aldersmith recommends epilation if the ringworm is recent, and if there are only a few places. It is also especially useful, he states, in the *megalosporon endothrix*, resistant, variety and in the *ectothrix* form.

The immediate medicinal treatment consists in the local



application of various substances, combined in a variety of ways, and of strengths suitable to the case in hand. Unfortunately for the practitioner of little experience in ringworm, the number of agents employed is so great that a choice of remedies becomes a matter of considerable difficulty. Although in ringworm of the scalp it is always best to select a given remedy and persevere with its application, it must be borne in mind that all cases cannot be treated alike, and it will be convenient to have at command more than one resource. The remedy employed must be selected with reference to the age of the patient, the stage of the disease and also to its dissemination on the scalp.

In young children, that is, under a year, the disease will generally yield to an ointment of sulphur of the strength of a drachm to the ounce of lanoline<sup>1</sup> lard or vaseline.

R.	Sulphuris præcipitati,	3j.	
	Ung. aq. rosæ,	3ij.	
	Lanolini,	3vj.	M.
S.	Apply night and morning.		

Recent cases occurring in older children may often be quickly cured by more decided stimulating remedies.

English physicians speak highly of Coster's paint (iodine, 5ij; colorless oil of wood tar, 3v). It may be painted on with a stiff brush every four or five days. Simple painting with the tincture of iodine and blistering with the acetic cantharidal collodion are also useful. In more chronic ringworm the oleate of copper, varying in strength from a half drachm to four drachms to the ounce, is very serviceable (Shoemaker, Weir).

Salicylic acid from a scruple to a drachm, and sulphur from one to two drachms to the ounce, make a valuable combination. The oleate of mercury five to twenty per cent., and carbolic acid twenty to sixty grains to the ounce of glycerine, or in ointment, are to be recommended. Bichloride of mercury two to four grains to the ounce, if

<sup>1</sup> Crocker suggests that the lanoline be diluted with one-fourth part of olive or almond oil.



used cautiously and not over too large a surface, is one of the most efficacious remedies.

Reynolds suggests the application of parasitocides both in favus and ringworm by means of galvanism. For this purpose the positive sponge electrode is saturated with the lotion and pressed directly over the diseased area, the negative pole being placed on some point near by. He reports favorable results, but Stelwagon and others have not met with the same success.

All of the mercurial preparations do good, such as the citrine ointment, the white precipitate ointment, etc.

Chrysarobin dissolved in chloroform (Aldersmith) or made into a paint with traumaticine or collodion (Alexander) is sometimes successful. Cavafy's lotion is made as follows :

R.	Acidi boracici,	℥j.
	Ætheris sulphurici,	℥j.
	Alcoholis,	℥iv. M.

S. Rub in with a sponge two or three times a day. Wash the head daily with warm water and soap.

Aldersmith says that salicylic acid is an excellent remedy both for small spots and extensive forms of ringworm.

R.	Acidi salicylici,	gr. x-xxx.
	Ætheris,	℥ij.
	Spiritum rectificatum,	ad ℥j. M.

Salicylic acid may be also combined with sulphur.

R.	Acidi salicylici,	℥j.
.	Sulphuris præcipitati,	℥jss.
	Vaselini,	℥j.
	Olei limonis,	q. s. M.

Startin's ointment, quoted by Duhring, I have used with happy effect.



℞. Sulphuris sublimati,	℥ss.
Hydrargyri ammoniati,	gr. x.
Hydrargyri sulphureti nigri,	gr. x.
Misce et adde,	
Olei olivæ,	℥ij.
Creasoti,	gtt. iv.
Adipis,	℥vj. M.

In ringworm due to *M. Audouini*, Sabouraud directs that each night the diseased area be covered with a compress wet in a solution of calcium chloride (℥iijss) and water (℥x), this tampon in turn being covered with rubber tissue. The next day wash with soap and cover with diachylon plaster. Twice a week apply tincture iodine to all spots.

In very rebellious patches the surface may be painted occasionally, the effect being watched, with glacial acetic acid, employing in the intervals a mild parasiticide like sulphur ointment. Another form of treatment for inveterate cases is by the use of croton oil. This method has both friends and enemies. Thin and many others condemn it outright, while Aldersmith, its especial advocate, and Cottle and Crocker look upon this procedure, when properly done in selected cases, as of considerable value. Crocker's opinion on this question is of especial importance. This conservative and experienced observer says that the croton-oil treatment is a certain method for chronic cases of limited extent and for the isolated and small groups of diseased hairs in disseminated ringworm. Croton oil should not be applied in the cases of scrofulous children, or in those under six years of age. In limited patches Crocker makes use of a liniment of one part of croton oil to ten of olive oil. While there may be some question as to the advisability of using the croton oil over even so limited an area as one-half square inch, I can see no objection to its employment in those cases displaying isolated stumps and black spots here and there over the scalp. For this purpose a drop of oil may be introduced into the follicle by means of a specially de-



vised needle. In a short while a pustule forms and the hair comes away.<sup>1</sup>

Electrolysis of single follicles is of especial value, and I am glad to see that Aldersmith and Thin agree with me in this matter. It must be remembered that these destructive methods produce alopecia, and consequently are only indicated for isolated stumps.

Judging from the recent expressions of opinion on the subject, the treatment of ringworm by formalin is not to be recommended. It is very painful and causes considerable local reaction.

The condition known as kerion requires only a soothing treatment, which may be made mildly antiparasitic. The tumor should not be opened, however suggestive of abscess it may be.

The treatment of ringworm should be kept up as long as there are any clinical evidences of the disease apparent, viz., the presence of characteristic stumps and abnormal desquamation; but this sort of evidence must be supplemented from time to time by microscopic examination.

**PROGNOSIS** The prognosis will naturally depend in a degree upon the extent and chronicity of the ringworm, as well as the variety of fungus present in a given case. In recent cases a cure should not be expected in less than two to four months, although, of course, a much less time may be required; in chronic cases, on the other hand, it is difficult to fix a limit, but even with the best treatment from one to two years may be put as an average duration. It must be said, however, that in this city ringworm is a less frequent and a much more tractable disease than it would seem to be either in Europe or our Eastern cities.

### **Tinea Circinata.**

Ringworm affecting the general surface may occur alone or in connection with the same disease on the scalp. It is

<sup>1</sup>For details in the use of this method see Aldersmith's valuable treatise on ringworm. He still maintains its great value in suitable cases if done with proper precautions.



now known that it may be due to one or another of the fungi already described. When due to the *Microsporon* or the *M. endothrix* the usual sites of the eruption are the face, neck, shoulders and trunk. The lesions are generally small, and exhibit themselves in the beginning as scaly, erythematous spots that spread peripherally with a clearing center. If the skin is infected by the *M. endothrix* parasite the patches are apt to present a papular, vesico-papular or vesicular border, sometimes arranged in rings. The disease may spread from the body to the scalp. If the body ringworm is due to the *M. ectothrix* fungus the reaction is more marked, there being present more dermatitis, and the margins are more elevated, and vesiculation, pustulation and crustings may supervene. This is probably the form which I described formerly as showing eczematous-looking patches. As a rule, the lesions are apt to be solitary, especially in the beginning. The scalp is not often affected in this variety, but the parasite may involve the beard. Severe types of ringworm of the body are described as occurring in tropical countries, such as Indian, Burmese, etc.

The form of disseminated eruption called by Hebra and Kaposi *tinea tonsurans maculosa* is said by some writers to be not ringworm at all, but examples of *pityriasis rosea* (Crocker) or *marginate lichen* (Jamieson). It is quite likely that the first suggestion is correct for most cases, as a careful reading of the German descriptions will demonstrate, but that ringworm may become well-nigh universal I have had the opportunity of observing, especially in the cases of two children in whom, in addition to *tinea tonsurans* of the scalp, the body from the head to the knees was implicated.

As a curiosity of location for *tinea circinata*, I reported a case some years ago in which the affection was confined to the palm of one hand.<sup>1</sup>

<sup>1</sup> Pellizzari states that there is a form of *tinea circinata* on the palms, which, beginning like an eczema, sudamen, or a herpetic eruption, may remain for years and simulate a chronic eczema or a *hyperkeratosis palmaris*.



When the fungus finds a lodgment in parts of the body where the skin is in contact, the concomitant conditions of heat and moisture seem to furnish more favorable soil for the growth of the fungus, and as a consequence the symptoms that are set up are more violent and obstinate. Under these circumstances the disease is encountered in the axillæ and more especially on the thigh, where, owing to the characters that it assumed, the disorder was called *eczema marginatum* by Hebra. From the latter situation it may spread to some extent down the thighs and over the buttocks and lower part of the abdomen. Although the parts may look as if affected by an ordinary eczema, the outer border will be abrupt, papular, sometimes vesicular and clearly defined against the outlying skin.

The nails may also become infected with ringworm, becoming brittle, opaque and often longitudinally furrowed. It is usually associated with the disease elsewhere. Sabouraud thinks the disease as affecting the nails is always due to the *M. ectothrix*, but I should doubt this on clinical grounds.

**DIAGNOSIS.** It is not always an easy matter to demonstrate the trichophyton microscopically. For this purpose a few scales may be taken from the periphery of a patch and moistened with liquor potassæ, and under a power of several hundred diameters both mycelia and spores may be detected, but as a rule in scant quantity. The clinical diagnosis is more immediately important.

It is to be distinguished from syphilis, eczema, psoriasis and seborrhœa. In syphilis, as a general thing, the concomitant symptoms will usually attract attention. The circinate papular syphiloderm at times resembles *tinea circinata* very closely, but according to Atkinson<sup>1</sup> the spreading border is usually more defined than in ringworm, and the color is of a deeper shade. The erythematous syphiloderm is more widely distributed, and scaling is absent. Eczema is much more pruritic and the patches lack the sharp definition of ringworm. The form

<sup>1</sup> Jour. Cutan. and Ven. Dis., Oct., 1882.



of eczema-like ringworm that is occasionally encountered is difficult to diagnosticate, but in children there will generally coexist a similar disorder on the scalp. Psoriasis with its clearing center and peripheral extension will also suggest tinea circinata; in the first-mentioned disease, however, the scaling is more profuse, and the eruption nearly always can be discovered on the elbows and knees. Besides a careful search will often detect the characteristic scale-capped punctate lesion of psoriasis. Seborrhœa of the trunk is to be differentiated from ringworm by its greasy scales resting on an uninflamed surface, and by the presence of patulous sebaceous orifices.

TREATMENT. The treatment is usually simple and effectual for ringworm of the general surface. A few paintings with tincture of iodine, after washing with soap and water, will often suffice. Among other remedies may be mentioned an ointment of salicylic acid (gr. xx) and sulphur (5j) to the ounce of vaseline; white precipitate, thirty or forty grains to the ounce; corrosive sublimate, two grains to the ounce of water or alcohol; hyposulphite of sodium, sixty grains to the ounce of vaseline or water; in fact any of the usual parasitocides. In the so-called eczema marginatum Taylor recommends two to four grains of corrosive sublimate to the ounce of tincture of benzoin. Bulkley extols the fresh sulphurous acid. In obstinate cases the modified Wilkinson's ointment is valuable. Rosenthal's paste is also useful. I think it is better to avoid chrysarobin preparations in this locality for fear of undue irritation. After proper scraping and paring similar remedies may be applied to the nails when affected.

Dubreuilh in onychomycosis smears the nails twice daily with equal parts of pyrogallie acid and olive oil. It produces acute inflammation and the discharge of the nail. Sabouraud uses a solution of iodine, fifteen grains; potassium iodide, thirty grains; water one quart. Absorbent cotton is soaked in this solution and applied to the nails under a rubber finger stall. It is certainly a more agreeable method than the production of a paronychia.



PROGNOSIS. The prognosis is favorable. Eczema marginatum is somewhat more obstinate, but a satisfactory result may be obtained with the exercise of ordinary patience and skill.

#### **Tinea Barbæ.**

Tinea barbæ, tinea sycosis, sycosis parasitica, barber's itch or ringworm of the beard is a form of acute inflammation of the hair follicles of the hairy parts of the face or neck, and is due according to Sabouraud to the *Megalosporon ectothrix* fungus. Like ringworm of the scalp it is a rare disease in this part of the world, and is less frequent everywhere than the first-named affection. I find, for example, but five cases in a total of 6,724 examples of all forms of skin disease occurring during a certain period in my practice. Of late years, however, I believe that the disease has become more common.

Tinea sycosis begins much in the same way that a ringworm does elsewhere, that is to say, as a reddish, circular, slightly scaly and somewhat itchy patch. Such a patch may be flat or raised at the outer border, and occasionally show a few papules or vesico-pustules. One or more lesions may be present. This superficial form of the disorder is the more common, and differs but little in appearance from tinea tonsurans. The moustache is rarely invaded, but the chin, submaxillary regions and the neck are usually affected.

Sometimes the mild or pityriasic form spontaneously recovers, or is readily cured, the soil being unfavorable to the growth of the fungus; but under other circumstances, in untreated, neglected or particularly susceptible cases, or perhaps from the nature of the fungus itself, the disease extends, the parasite attacks the follicles with the result of inducing follicular and peri-follicular inflammation, and the consequent formation of deep-seated nodules, that often run together to make more or less extensive lumpy patches. Much pain and burning is often experienced, especially in acutely developed cases, and the parts present a deep red or purple appearance.



The hairs either fall out over the affected areas or may be extracted with great ease, and from the follicular opening a mucoid secretion is poured out as in kerion. Often pustulation is a marked feature, and considerable crusts form, which upon removal exhibit an uneven raspberry-like surface. One or more nodules may be present, or occupy circumscribed regions, or the whole surface of the neck and chin may be invaded. Permanent alopecia may result from destruction of the hair follicle. The disease is apt to pursue a chronic course.

Sabouraud insists that the parasite is always of animal origin. As the disease is less frequent in men who wear beards or shave themselves, it is likely that the barber and his utensils are to a certain extent carriers of the infection. Aldersmith says that he has never known the fathers of children with common scalp ringworm to get parasitic sycosis from them. Bulkley, on the other hand, states that clinical experience shows that this disease is constantly contracted from, and again produces in others, the ordinary forms of ringworm of the body and scalp.

**DIAGNOSIS.** The characteristic features of the disease are, in the mild form, the presence of one or more circular, scaly patches in the region of the beard, with or without a raised margin, which sometimes clear in the center, leaving a ringed border; in the severe form, are acute folliculitis, indurated nodules and brawny, deep-seated infiltrations from which the hairs have fallen out or may be painlessly extracted, showing besides either a crusted surface or exhibiting a sticky, mucoid secretion. Tinea sycosis is to be differentiated from simple sycosis, eczema and certain forms of syphilis.

Parasitic sycosis develops much more acutely than the non-parasitic form, and exhibits considerably more and deeper involvement of the tissues, especially in the shape of nodules and lumpy patches. In the parasitic sycosis there are apt to be several points of development, and the hairs come away with much ease, features that are not ordinarily observed in simple sycosis. The history and



course of eczema differ entirely from that of tinea sycosis; and, although crusting may be a feature in both affections, there will not be found lumpiness and deep brawny swelling in eczema. The history and concomitant symptoms of syphilis have nothing in common with sycosis, and in the papillomatous variety of the former disease, the odor, the crusts and the presence of ulceration would establish the proper diagnosis. In all cases of doubt microscopic examinations should be made.

**TREATMENT.** In the early and superficial stage the disease may be cured without great difficulty. Often the application of the sulphur and salicylic acid ointment or an ointment of white precipitate (gr. xxx) and the liquor picis alkalinus, one drachm to the ounce, is quite sufficient. A more elegant and cleanly method is the application of the bichloride of mercury (gr. ij–iv) in the ounce of tincture of benzoin (Taylor) or the same in water or alcohol. Ihle praises resorcin (R. Resorcini, ʒijss; vaselini, ʒjss; zinci oxidi, amyli, āā ʒvj. M.).

In the deep or kerion-like form it is necessary to remove crusts, to shave, and, as the hairs are readily extracted, to epilate. The crusts are best removed by applying the unguentum vaselini plumbicum spread on cloth, which also, at the same time, soothes the inflamed surfaces. Although, as a rule, it is altogether unnecessary to open the nodules, occasionally much comfort is secured by free incisions. After the acuteness of the attack has worn away somewhat it is advisable to begin the use of parasiticides. Sulphur and tar, mercury, sulphur and salicylic acid, the oleate of copper, and the hyposulphite of sodium in ointment or lotion are all efficient.

- |    |  |         |
|----|--|---------|
| R. | Sodii hyposulphitis,                             | ʒiv.    |
|    | Aquæ destillatæ,                                 | ʒiv. M. |
| S. | Mop on affected parts three or four times a day. |         |
| R. | Acidi carbolicæ,                                 | ʒj.     |
|    | Sulphuris precipitati,                           | ʒj.     |
|    | Vaselini,  | ʒj. M.  |
| S. | Apply twice a day.                               |         |



Shaving should be kept up daily, or at any rate every other day, for some months after apparent cure.

PROGNOSIS. Untreated cases run on indefinitely ; but, if promptly and energetically treated, a favorable result may be expected ; in fact it is a much more tractable affection than ringworm of the scalp.

### TINEA IMBRICATA.

This fungus disease is a species of ringworm that is found in the Malay Archipelago and certain of the Pacific islands. The disorder may attack any part of the body, but usually avoids the scalp and other hairy parts. It is contagious and has an incubation period of about nine days after a primary inoculation. The disease "begins with inflamed circular patches, which extend, coalescing with neighboring patches, become scaly and very itchy, and ultimately, unless its progress is arrested by treatment, the whole surface of the body becomes affected. The scales are arranged in concentric circles, in spirals or in irregular curves about a quarter of an inch apart. The scales stand out free, being only attached by one edge to the skin."

### MYCETOMA.

Mycetoma, or podelcoma, is a disease found principally in India, though cases have been reported in this country.<sup>1</sup> There are three varieties of the malady, which are known as the black and the white and the red. The disease attacks generally the foot, though the hand and scrotum may be affected. The first evidence of the affection is a vesicle, pustule, papule, hard nodule, or a black mottling of the skin like tattoo-marks. After a time a sinus forms which discharges pus, whitish bodies, and then black masses resembling fish roe. In a fully developed case the foot is much distorted, the arch broken down, the whole foot studded with nodules representing the orifices of sinuses. About the sinuses are scattered black gran-

<sup>1</sup> Hyde, Jour. Cutan. and Genito-urin. Dis., Jan., 1896.



ules in the skin. The discharge of the roe-like masses from the sinuses is the most characteristic sign of the disease. These masses contain a ray fungus very similar to actinomycosis fungus, although not identical and staining differently.

Madura foot runs a very chronic course, but is not dangerous to life. When an affected foot is examined by dissection, the sinuses are found to lead into cavities containing both the white masses which are found in the discharge and the fish-roelike bodies.

Complete removal of the diseased tissue seems to be the only successful treatment. When the disease is superficial, scraping with the sharp spoon may accomplish this. If only a toe or a finger is involved, it should be amputated. If the disease is advanced, only the removal of the limb well above the affected area will suffice.

### ACTINOMYCOSIS.

Actinomycosis of the skin is a very rare affection. It usually develops as secondary to a deposit of actinomyces in the deeper tissues. In this form the disease is most common in the neck and about the lower jaw. Over an indolent hard swelling the skin becomes thinned, red and eventually gives way, discharging pus which may contain the characteristic yellow, pin-head-sized granules. In this form the disease very much resembles what is seen in tuberculous glands. When a sinus has thus formed at times about the opening, nodules of a reddish or bluish hue appear, which may suppurate. Another form in which actinomycosis of the skin occurs is a dense induration of the skin and subcutaneous tissue with several sinuses, somewhat resembling carbuncle.

Actinomycosis generally arises by the fungus gaining access to the body through a carious tooth, and this explains why it is so commonly seen about the neck and jaw. It has been observed to attack other parts of the body, as the hands, and many regard Madura foot as a form of actinomycosis.



The cause of the disease is the ray fungus, which is most apt to be discovered if the granules mentioned above are subjected to a microscopical examination. The fungus is seen as small threads branching from a common center and expanding at the peripheral extremity into club-shaped masses. When examined by a high power these threads are found to be made up of little spherical bodies arranged in rows and held together by a delicate membrane. The club-shaped bodies are thought in reality to be degeneration forms.

Actinomycosis is usually acquired from animals, but it is possible that it may be got by handling straw or grain. The disease may have an incubation period of months or years.

The only way to make a positive diagnosis of actinomycosis is to find the fungus, and this is often difficult.

**TREATMENT.** It was formerly thought that the prognosis in actinomycosis was invariably bad. On this account the most serious operations were readily undertaken. More recent observations have shown that a large proportion of the cases live many years, and some recover spontaneously, so that severe operations are looked upon with disfavor. When possible, sinuses and abscesses should be thoroughly laid open, and, after curetting, washed with a solution of bichloride of mercury. Gautier cured a case by liberating nascent iodine in the tissues by means of injecting solutions of iodide of potassium, and then passing a galvanic current by needles introduced into the tissues. For some time veterinarians have attributed value to the use of iodide of potassium in cattle, and recent reports<sup>1</sup> of the use of this drug in man are so favorable as to make it the duty of the surgeon to try the remedy thoroughly in every case.

Rydygier<sup>2</sup> and others have reported favorably on parenchymatous local injections.

<sup>1</sup> Ransom, *British Medical Journal*, Jan. 27, 1894.

<sup>2</sup> *Wien. Klin. Woch.*, Sept. 12, 1895. See also Bérard's article as abstracted in the *Brit. Jour. Derm.*, Oct., 1897, p. 418.



**TINEA VERSICOLOR.**

*Tinea versicolor*, or *pityriasis versicolor*, is a vegetable parasitic disease due to the *microsporon furfur*. It attacks adults and appears on the trunk in the form of large and small, slightly scaly patches of a fawn color. It is a very common affection, probably occurring much more frequently than the statistics would indicate.

It is rarely met with on the face or scalp<sup>1</sup> and never occurs on the hands or feet, being limited to the front and back of the chest, the covered part of the neck, the arms, the axillæ and groins.

It begins as small round spots or points that gradually enlarge, and finally, by coalescence and the continuous development of new lesions, large sheets of eruption may be formed. The spots may, however, remain discrete, and even where large patches have appeared smaller spots are to be seen beyond and between them, as well as on other portions of the trunk. The patches are but slightly elevated, and are usually the seat of a fine desquamation, or if the scaling is not well developed, it can be made more apparent by scraping the surface with the finger nail or a dull knife. The color has been well described as fawn or light brown, although under certain circumstances the patches may be dark brown or rarely almost black. Itching is not a marked feature. The disease when allowed to go untreated may continue indefinitely. Although a vegetable parasitic disease, it is but feebly contagious.

*Tinea versicolor* is due to the *microsporon furfur*, which invades the superficial layers of the epidermis only.

Examined under the microscope after moistening the scales with liquor potassæ this parasite is seen to consist of round spores that have a uniform size, and arranged in masses like bunches of grapes. The spores are joined by interlacing mycelia. The arrangement of the spores in groups is quite distinctive.

*Tinea versicolor* is a disease of adult life, although oc-

<sup>1</sup> Biart reports a case of *tinea versicolor* of the face, and Payne records the disease on the scalp.



casionally observed in children. I once saw the disease in a child of eleven years who wore a plaster jacket. The father of this child also was affected. The idea that the disorder is more frequent in consumptives is probably due to the fact that it is more commonly observed in them from the necessity of uncovering the chest for physical examination, and perhaps also to their great tendency to sweating, a condition favorable to the development of the fungus. It may not be amiss to state that tinea versicolor has nothing in common with syphilis or derangement of the liver.

DIAGNOSIS. The recognition of the disease is without difficulty if the clinical symptoms are remembered, and in case of doubt the microscope will readily settle the question.

Chloasma, the affection that it most resembles superficially, does not, however, occur on the trunk but on the face. Seborrhœa of the trunk, pityriasis rosea, the erythematous syphiloderm and erythrasma should be excluded in making the diagnosis.

TREATMENT. The treatment consists in washing the parts night and morning with green soap and warm water, and afterwards the free application of the following lotion:

R.	Sodii hyposulphitis,	3vj.
	Aquæ destillatæ,	3iv. M.
S.	Local use.	

In obstinate cases several baths a week of the hyposulphite of sodium—one-half pound to thirty gallons of water—helps on the cure. An ointment of sulphur and salicylic acid—one scruple of the first and one to two drachms of the latter—is equally efficacious. Disinfecting the underclothing as suggested by Taylor undoubtedly prevents reinfection.

PROGNOSIS. The temporary removal of the eruption is more or less readily accomplished, but relapse of the disease is to be expected in the course of time.



## ERYTHRASMA.

This slight affection, first described a number of years ago by Burchardt, and later by Bärensprung, has been made the subject of further study in recent years by Balzer, Riehl, Behrend and others. It occurs in situations where the skin is in contact, *e. g.*, folds of axillæ, cleft of nates, and in the inguinal and genito-crural regions—and consists of variously sized, slightly furfuraceous patches of a light red color, which later become yellowish, reddish or brownish. Occasionally the patches may cover large surfaces (Besnier). It is chronic in its course, and gives rise to no especial subjective sensations. It is generally agreed that the disease is due to a parasite first called by Bärensprung the *microsporon minutissimum*. Behrend believes that erythrasma begins as an ordinary eczema intertrigo upon which the parasites become colonized, just as under other circumstances the trichophyton, finding a lodgment on a similar surface, will set up an eczema marginatum. The parasite is found only in the horny layer of the epidermis, where its presence gives rise to the brown discoloration characteristic of the disorder. The parasite most closely resembles the *microsporon furfur*, but differs from it in that its elements are very much smaller than in the latter. Attempts at transference and cultivation have been unsuccessful.

**DIAGNOSIS.** Erythrasma is to be distinguished from pigment spots by the facility with which the superficial brownish maculation may be removed with a dull knife. The principal difficulty of diagnosis arises in connection with tinea versicolor. Often the microscope alone can decide the question, but some help is secured for clinical diagnosis by remembering that the patches of tinea versicolor are not confined to regions of the body which are in contact, as is the case in erythrasma, but are also to be found on the free surfaces of the trunk and arms; besides the color of the lesions in erythrasma is brighter than the constantly fawn-hued patches of tinea versicolor.

**TREATMENT.** The treatment is the same as for tinea



versicolor. The following ointment rubbed in twice a day generally suffices.

R.	Acidi salicylici,	℥j.	
	Sulphuris præcipitati,	℥j.	
	Ung. aquæ rosæ,	℥j.	M.
S.	For local use.		

Riehl recommends a one-half per cent. alcoholic solution of corrosive sublimate and Wilkinson's ointment.

PROGNOSIS. The disease is altogether a trivial one and readily removed by treatment, although there is a liability to relapses.

### PINTA DISEASE.

This is a fungus disease, prevalent in tropical America, which produces discolorations of the skin. It is characterized by patches of variable shapes and colors, and affects the exposed parts of the body except the palms and soles, but it may invade the entire surface, including the scalp. The color of the lesions varies from a dull white to a grayish, blue or red. The patches are covered with a branny desquamation in the beginning, but later the scales are much larger. The hairs turn white and fall out. Ulceration is present in severe forms. Itching is intense and the emanations from the patients very offensive. The disease is very chronic, but spreads slowly. It occurs at all ages, and attacks by preference persons in the lower walks of life. It is generally supposed to be contagious. The treatment is by the application of anti-parasitic remedies.

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## ANIMAL PARASITIC AFFECTIONS.

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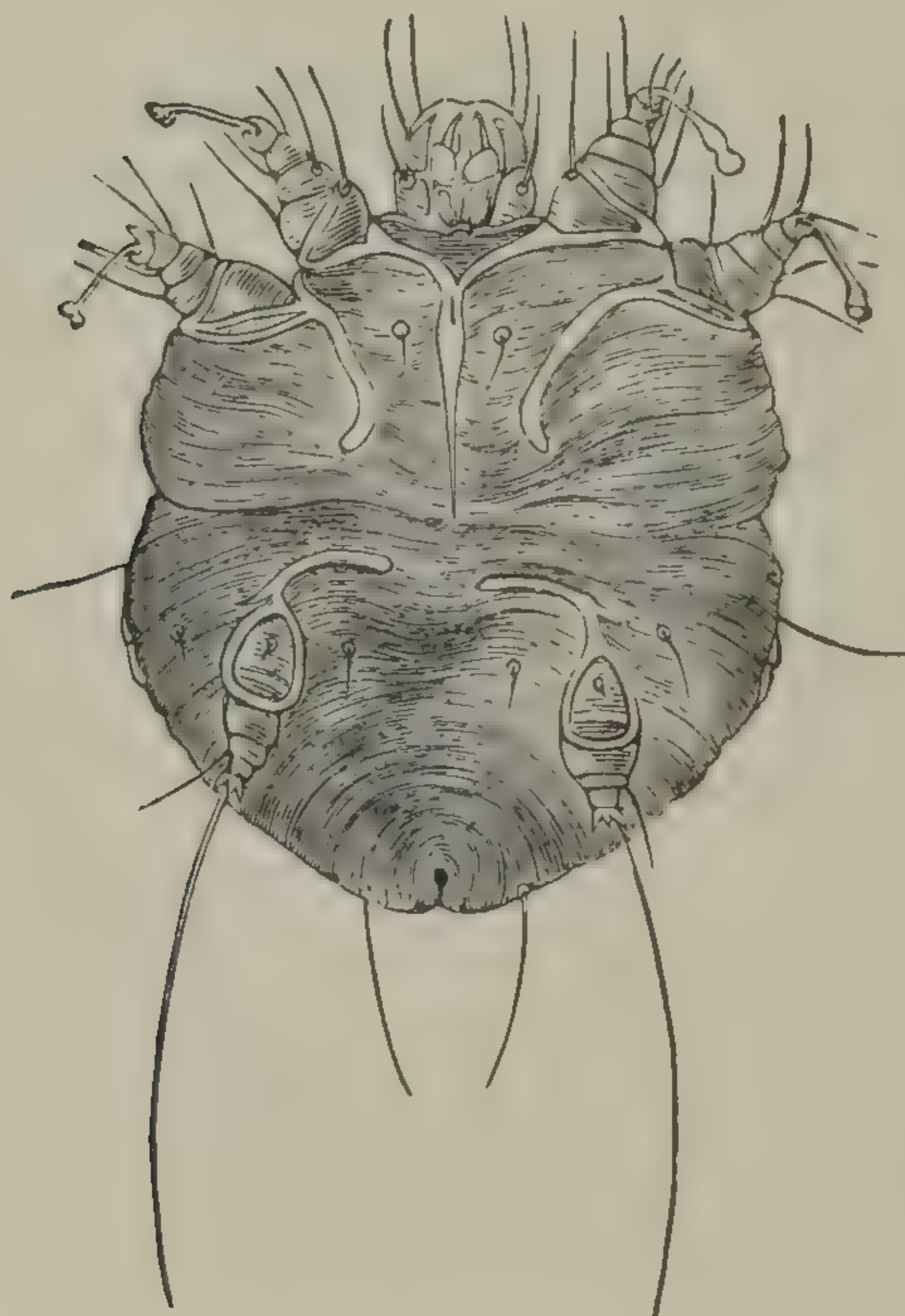
### SCABIES.

Scabies, or the itch, is a contagious disease of the skin induced by the presence of an animal parasite, the *acarus scabiei*. The affection is very common among the poorer



classes in Europe. It is notably frequent in Scotland. In recent years scabies has greatly increased in this country. Fifteen or twenty years ago in St. Louis, even in dispensary practice, a case of scabies was a rarity, but now the disorder is far from uncommon. The itch mite is about the size of a pin head, and of an oval shape. The female is larger than the male and has four pairs of legs. The anterior pairs are provided with suckers, while those situated posteriorly are occupied by long hairs in the same

FIG. 33.



Larva of *Acarus Scabiei*, with six legs; ventral aspect (Kaposi).

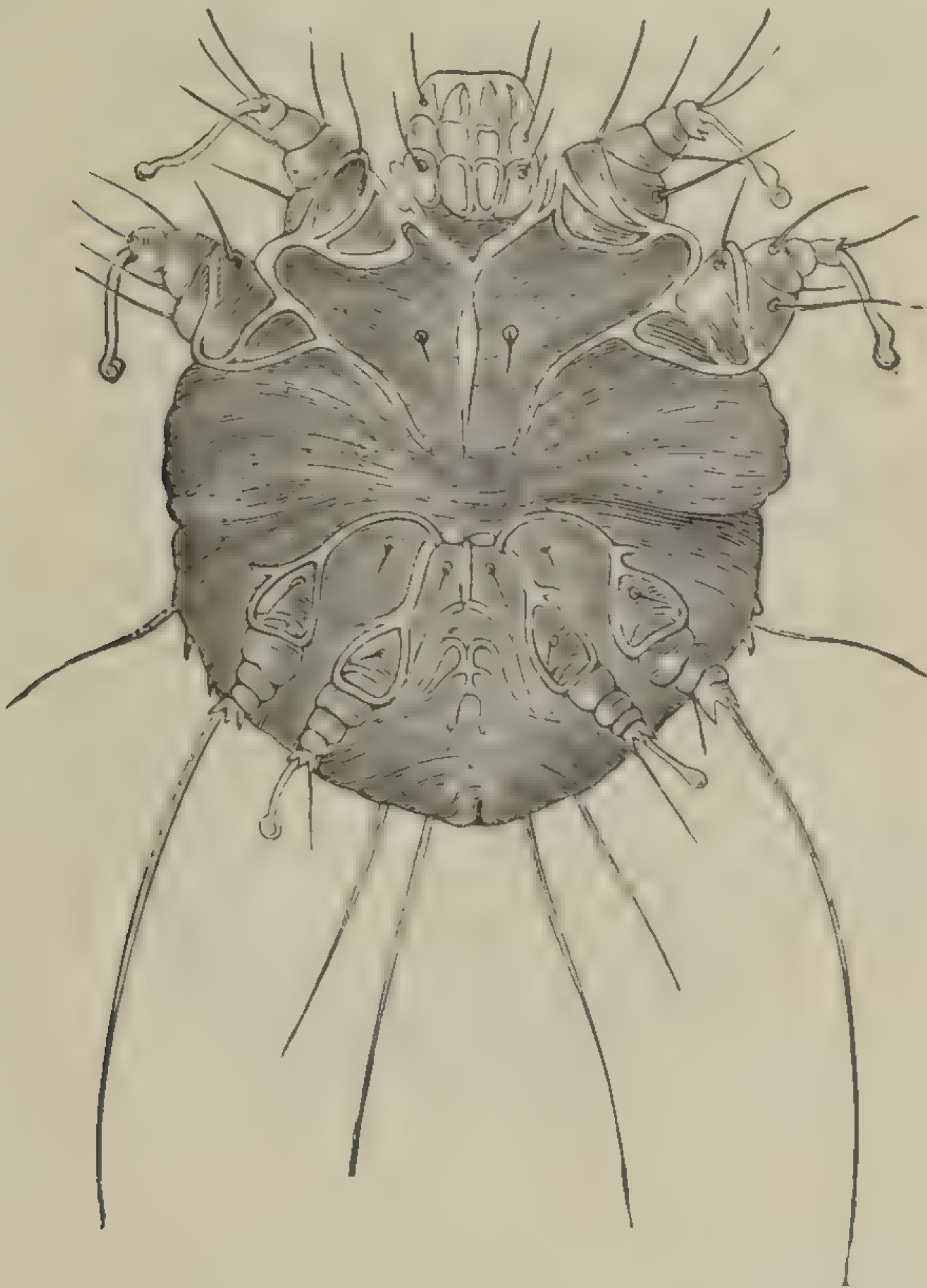
situations. In the male the two posterior hind legs have suckers similar to those on the fore limbs. The young acarus has but six legs, four anteriorly and two posteriorly, the two extreme posterior legs developing after shedding its first skin.

The male acarus does not enter the skin, but lives on the surface. The female, however, penetrates into the



epidermis, producing the cuniculus or burrow, which to the eye presents a tortuous, slightly raised, dotted, yellowish or whitish line of an average length of about one-fifth inch, although sometimes considerably longer. In

FIG. 34.



*Acarus Scabiei*, male, ventral aspect (Kaposi).

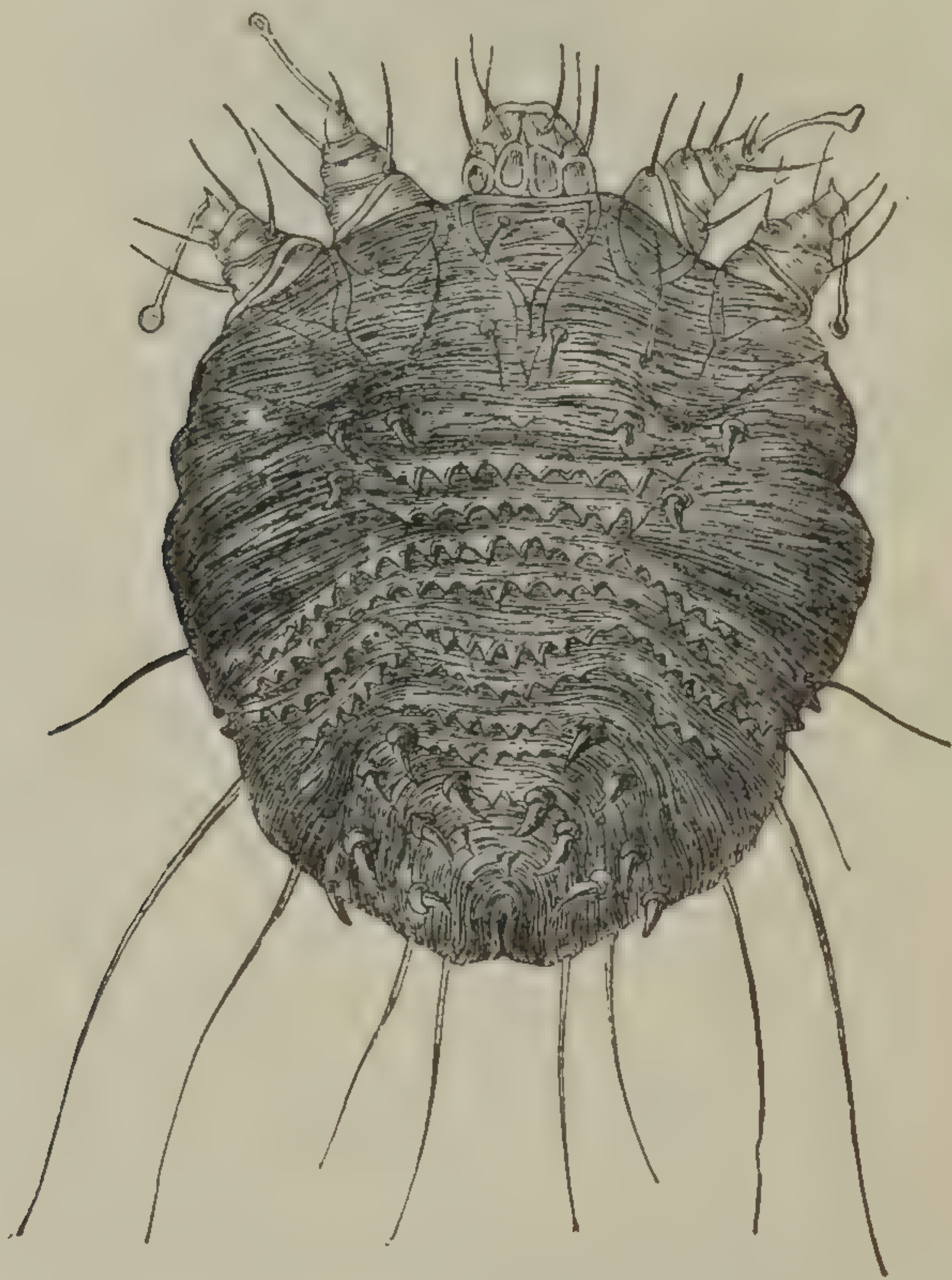
this tunnel the impregnated female lays her eggs, two dozen or more, depositing one or two daily, and finally dies. The eggs hatch out in from five to fourteen days, the young escape to the surface, and the process of burrowing, etc., is again repeated as before.

The lesions seen in scabies are cuniculi, or burrows, papules, vesicles, pustules and various secondary effects of scratching, such as crusts, excoriations, furuncles, etc. It will, therefore, be noted that the symptoms arise on the one



hand directly from the inroads of the itch mite in the first place, and, secondly, from the traumatism inflicted on the skin by the patient himself. The chief subjective symptom is intolerable itching, which is noted to be greatly aggravated after the patient retires to bed. It must not be supposed, however, that all cases of scabies present the same symptoms, since these will depend to a great extent upon the age, habits and, perhaps, susceptibility of the infected person.

FIG. 36.

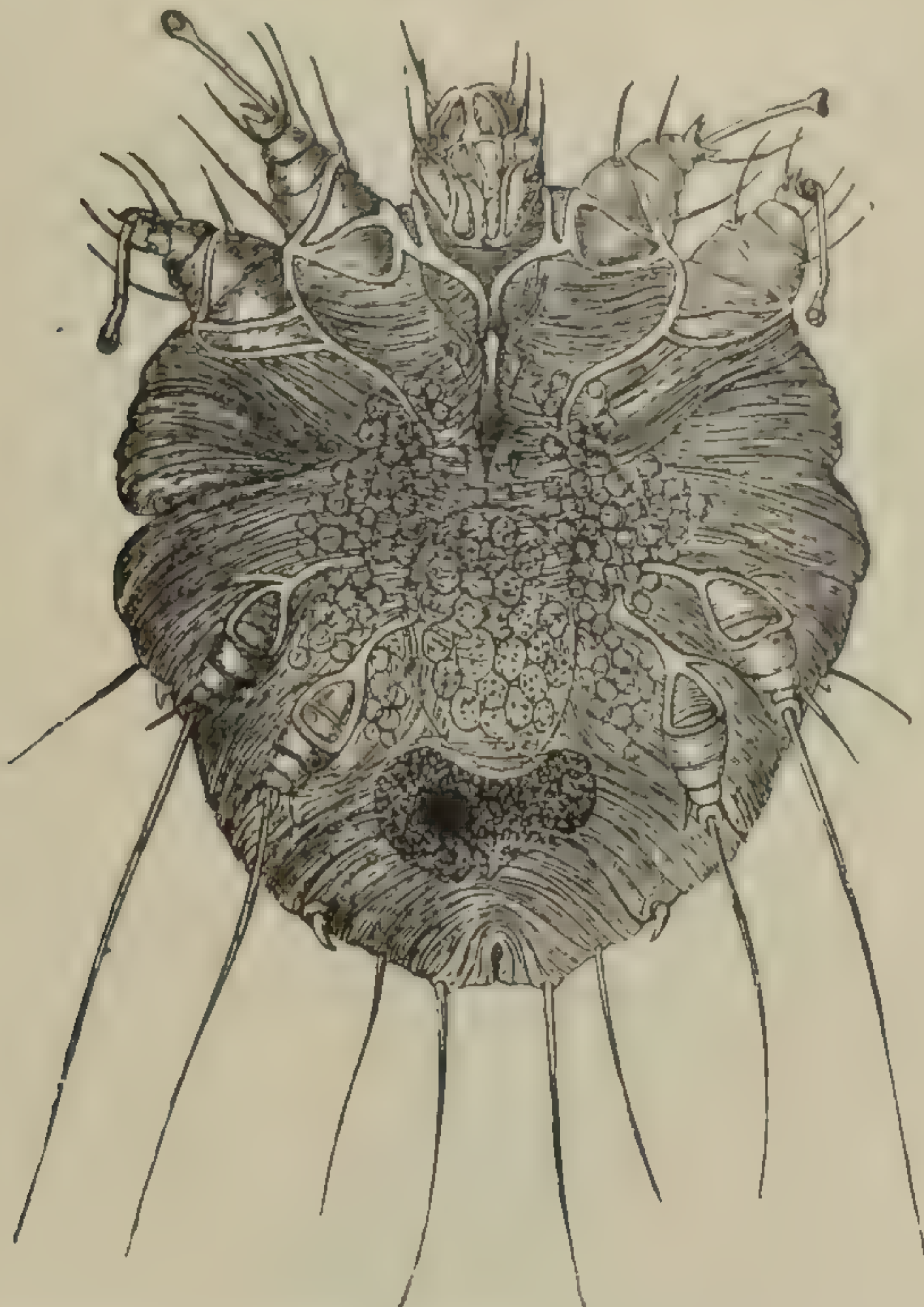
*Acarus Scabiei*, female, dorsal aspect (Kaposi).

I quite agree with Greenough that the burrow is by no means always to be detected, and in many cases cannot be made out at all. They are best seen on the penis, navel, sides of the fingers and wrists, and also on the feet of children. A vesicle may often be noted at the entrance to the burrow, the acarus lying at the other end. The



localization of scabies is characteristic. In a general way it may be said that the itch insect seeks those parts of the body that offer the most warmth and moisture. In the

FIG. 37.



*Acarus Scabiei*, pregnant female, ventral aspect (Kaposi).

adult male the acarus attacks the skin between the fingers, the flexor surfaces of the wrists, the buttocks, the lower part of the abdomen and the region about the internal malleoli, *and especially the penis*. In women the breasts are involved. The face and scalp are never attacked in grown persons, but the faces of infants at the breast may be invaded. Children are also apt to show the disease on the feet and buttocks particularly.

The inflammatory lesions of scabies are often multiform, that is to say, papular, vesicular, pustular, and in prolonged or severe cases various secondary changes may be present at one and the same time. On the contrary, however, the



disorder may be so mild that a few papules and vesicles only are present. The lesions are irregularly scattered, and do not form groups.

FIG. 38.



Burrow of scabies with acarus (Kaposi).

The disease is a dermatitis or artificial eczema due directly to contagion, that is, the conveyance of an impregnated female acarus to the skin.

Notwithstanding that under favorable conditions scabies is highly contagious, it is a noteworthy fact that the affec-



tion is not conveyed in the ordinary intercourse of life, such as hand shaking, nor do physicians seem to acquire it in the manipulation of affected persons. Sleeping in the same bed, wearing infected clothing, and the like, are the principal agents of propagation. The acarus respects neither age, sex nor social condition.

**DIAGNOSIS.** The diagnosis of scabies is, as a rule, readily made. Absolute certainty can only come from the discovery of the acarus and its burrow; but as it is often impossible to demonstrate their presence, we are generally obliged to rely on the rational signs of the disease. The localization of the dermatitis is nearly always characteristic, viz., the skin between the fingers, the flexor sides of the wrists, the lower part of the abdomen, the buttocks, the penis in the male and the breasts in the female. The absence of such a generalized eruption from the face in the adult is always a noteworthy circumstance, and its tolerably definite restriction to the parts mentioned adds greatly to the suspicion. In children this localization is much less strict; the face and the feet may both be affected, while, on the contrary, the disorder may be absent from the hands, and more developed on the trunk and the nates. In children large pustules and even bullæ may be encountered. While the lesions of an eczema are spoken of as being multiform, they are not so in the manner seen in scabies; that is to say, they are not seen as a discrete, widely spread eruption of papules, vesicles, pustules, etc. *Pediculosis corporis* is found on the covered portions of the body, especially on the upper part of the trunk, and the lesions are altogether dissimilar. Finally, the fact of contagion taken in connection with the other symptoms is a most important aid in diagnosis.

**TREATMENT.** The disease is quickly amenable to properly directed treatment. Sulphur in some form is the most satisfactory remedy. The usual plan is to direct the patient to take a hot bath with frictions of green soap, and afterwards to apply the following ointment morning and evening for three days.



R.	Sulphuris præcipitati,	℥xij.	
	Vaselini,	℥vj.	
	Olei rosæ,	q. s.	M.

S. Rub in one ounce thoroughly night and morning.

The salve must be well worked into the skin, especially in those parts most covered with the eruption. It is not necessary to apply it to the face. I usually direct that the patient keep on the same underclothes, and sleep in the same sheets, during the course. If the treatment has been completed in the morning the same garments are kept on till night, when a hot soap bath is again taken, and fresh underclothes put on and the sheets renewed. For perhaps a week longer a small amount of salve may be rubbed in at night, in order to make assurance doubly sure. It is a *sine qua non* of the treatment that the underclothing and sheets be disinfected by boiling. The outer garments should be thoroughly ironed with a hot iron.

A large number of other parasitocides have been recommended. McCall Anderson speaks highly of styrax.

R.	Styracis liquid.,	℥j.	
	Adipis,	℥ij.	M.

Duhring recommends balsam of Peru in conjunction with sulphur for scabies in children.

R.	Sulphuris sublimati,	℥j.	
	Balsami Peruviani,	℥ss.	
	Adipis,	℥j.	M.

Jullien and Descouleurs<sup>1</sup> say that in the treatment of scabies it is sufficient to paint a thin coat of balsam of Peru over the skin and to rub it in gently, a previous soaping not being necessary. The application is made at night, and the next day a bath is taken. The authors claim for this method certainty and simplicity, and assert that it is especially indicated when from any cause baths are contra-indicated.

<sup>1</sup> Ann. de Derm. et de Syph., April, 1896.



Hebra's modification of Wilkinson's ointment is much used abroad.

℞.	Sulphuris sublimati,	
	Olei cadini,	āā ℥iv.
	Cretæ præparatæ,	℥ijss.
	Saponis viridis,	
	Adipis,	āā ℥j. M.

An ointment of naphthol, chalk and green soap as suggested by Kaposi is very effectual and elegant.

℞.	Naphthol.,	℥ss.
	Saponis viridis,	℥jss.
	Cretæ alb. pulv.,	℥ijss.
	Adipis,	℥iij. M.

If after a course of specific treatment the skin is left inflamed and irritable, it will be necessary to prescribe soothing remedies, although, as a general thing, the cause of the dermatitis having been removed recovery is speedy.

PROGNOSIS. Scabies is a perfectly curable disease, provided the treatment is thoroughly carried out, and the proper precautions are taken against the risk of reinfection.

## PEDICULOSIS.

Pediculi, or lice, infest different portions of the human body, and give rise to a contagious affection variously called pediculosis, phtheiriasis, or, in common parlance, lousiness. Three varieties of lice are met with, which differ both in their form and habitat. The symptoms that they occasion really constitute a dermatitis, or artificial eczema, but, according to the region invaded, will be noted certain differences in clinical expression.

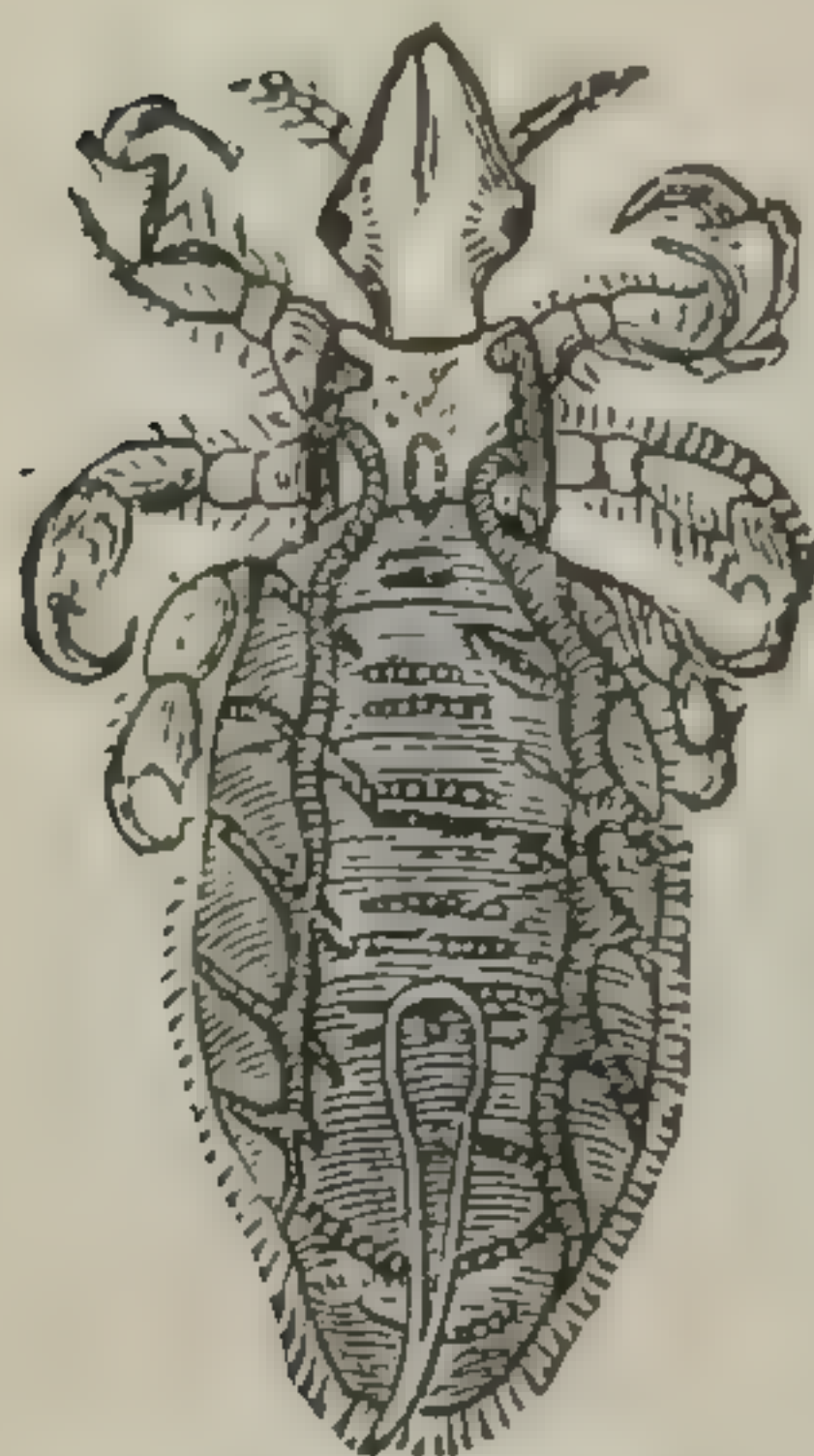
### Pediculosis Capillitii.

This is the most frequent form of pediculosis, and is due to the presence of the pediculus capitis or head louse. The pediculi may be present in large or small numbers, and may be detected upon the hair or scalp, but generally,



however, the nits are more readily discovered. The occipital region, as affording the two conditions of heat and moisture, is the favored region for the head louse. Pediculosis capillitii is more frequent in children and in

FIG. 38.



*Pediculus capillitii*  
—Male (After  
Küchenmeister).

women than in the adult male; and it is more common in the poorer classes. There is usually much soreness of the scalp, and the irritation set up by the attacks of the pediculi causes scratching which in turn produces the lesions so characteristic of pediculosis in this situation, namely, abrasions and excoriations, a foul, sticky secretion that mats the hair together, and greenish-yellow crusts. The ravages of the pediculi are always limited to the scalp, but when the hair is long, similar lesions may be seen on the contiguous skin.

A sympathetic enlargement of the occipital glands, as well as those in front of the ears and at the side of the neck, is the usual accompaniment of pediculosis capillitii, and in neglected cases suppuration may occur. Even the general health may materially suffer from long-continued nervous erethism and loss of sleep induced by the incessant pruritus. The presence of a pustular eczema in the occipital region, with coincident lymphatic gland enlargement, occurring in a woman or child, gives rise to a fair presumption that the affection is due to lice.

With a little care the parasites themselves may generally be discovered, and an examination of individual hairs will show the ova, or nits, attached to them near the roots, looking like minute scales of the size of a small pin's head. One nit only is as a rule attached to a hair, but sometimes a dozen or more may be counted. A nit is to be distinguished from a scale by the fact that the former is glued to the hair on one side and cannot be readily brushed off, while a scale is often pierced by the hair shaft and may be removed without difficulty. The pediculi escape from the ova in from three to nine days, and are full grown in



about nine days more, and at the end of a similar period are capable of reproduction.

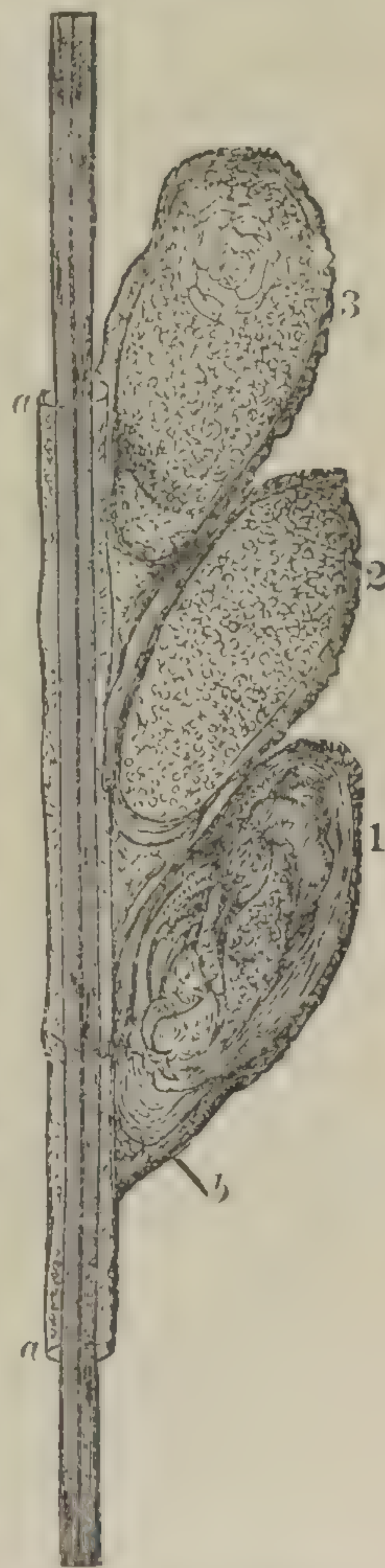
The disorder is readily cured, but a complete and permanent success is only secured by destroying the nits as well as the pediculi. The most effectual plan is to shave off the hair, and apply soothing preparations for the relief of the dermatitis; but as this procedure is not always desirable, it is necessary to employ other measures. If it is determined not to cut the hair, the physician may order equal parts of petroleum and olive oil, or the petroleum alone, to be rubbed into the scalp with white flannel, taking care to keep it from running down on the neck and face, and following up the application next morning with a hot shampoo of soap and water. In order to get rid of the nits, the hair may be washed with vinegar to dissolve the little rings by which they are attached, after which a fine-tooth comb may be employed to detach them.

This latter procedure should be kept up for a week or two. Any local inflammatory symptoms that are left over after the destruction of the pediculi should be treated on general principles.

#### Pediculosis Corporis.

The body, or more accurately the clothes' louse, attacks mostly elderly people of the poorer classes, although it should always be remembered that persons of wealth and refinement may be accidentally infested. These pediculi confine their depredations to the body, but they are rarely to be found on the sufferer, since they live in the seams of the undergarments, where their ova are deposited, the

FIG. 40.

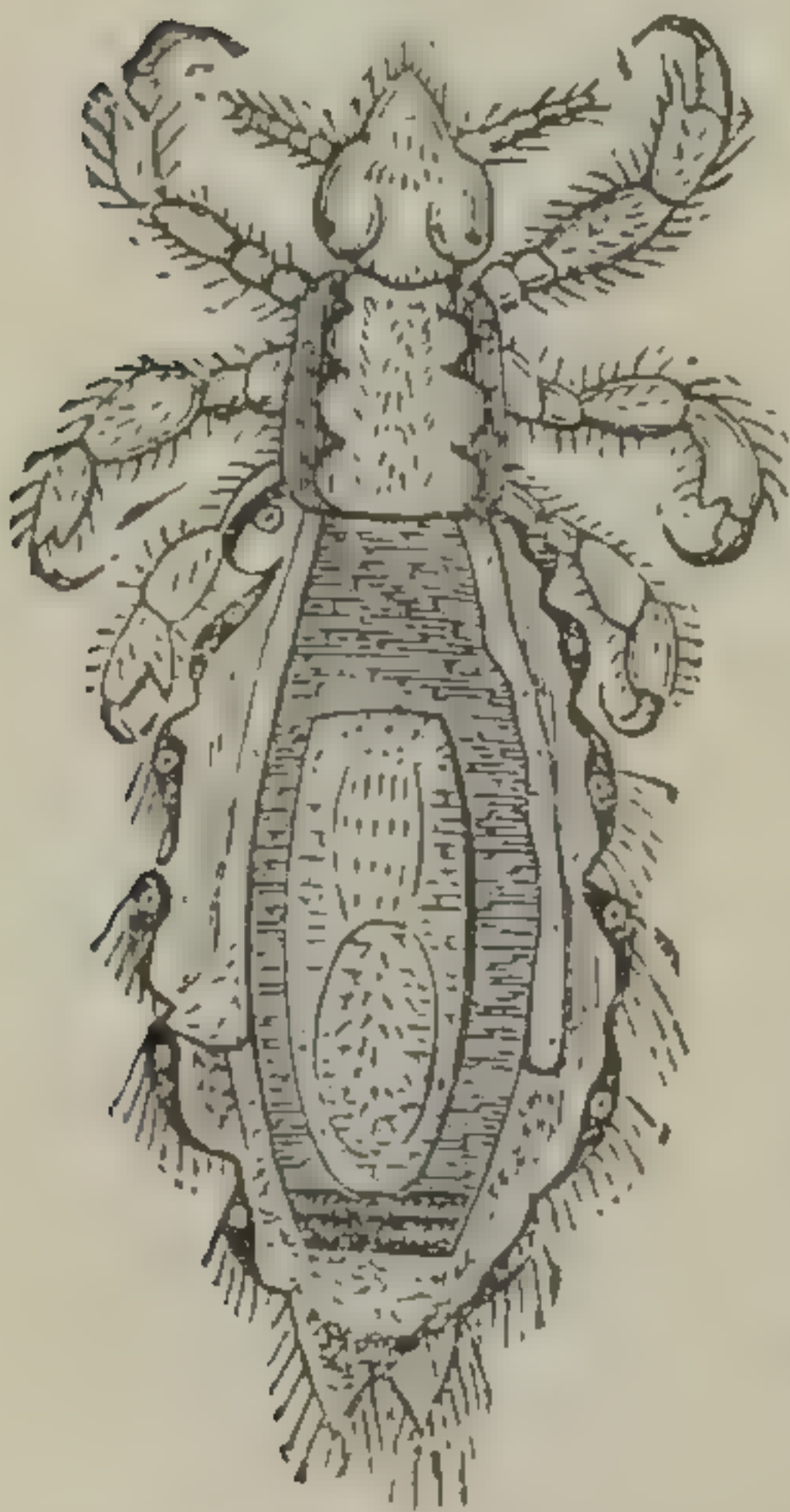


Ova of head-louse attached to hair (Kaposi).



skin itself being used as a feeding ground only. The bite of the insect consists of a minute hemorrhagic dot, surrounded by a red areola, which may be effaced by pressure, but leaving the central dark speck intact. Most of the lesions present are caused by the efforts of the patients to relieve the intolerable itching aroused by the parasite, and are made up of excoriations from the nails, and of a variety of papular, pustular, urticarial and furuncular eruptions. In long-standing cases the affected regions become deeply pigmented, and covered with scales and crusts. While the eruptions may be

FIG. 41.



*Pediculus corporis*  
(After Küchen-  
meister).

discovered on various parts of the body, it is mostly to be found on the neck and shoulders. According to the late Tilbury Fox "the lesion which is characteristic is not a bite or a scratch; it is the opening of a follicle dilated by the proboscis of the pediculus, and showing in its center a speck of at first bright red blood, which soon acquires a darker hue. This hemorrhagic speck is not raised to the feel or eye. It looks like a circular, cup-shaped depression about the size of the blunt point of an ordinary pin, with a well-marked circumferential edge (a dilated follicle) and a black dot in the center. It may be confounded with scratched hyperæmic follicles, or papillæ, or minute excoriations. The latter are raised, and on being examined with a magnifying glass are seen not to be round, but to have ragged edges and to present a bleeding surface; the excoriations are irregular in shape, and want the look of the dilated follicle, with the speck of blood in the center."

The diagnosis is most certainly fully established by finding the parasite, either on the body, which is rare, or in the seams and folds of the garments; but as often clean clothes are put on just before the physician is consulted, it is necessary to bear in mind the character of the



lesions just described, and especially the location of the eruption about the neck and back.

The treatment should be mainly directed to getting rid of the lice in the clothing. This is best accomplished by long-continued boiling, or by baking in an oven at a temperature of at least 210° F. It is also useful, according to Anderson, to sprinkle some of the powder of staphisagria upon them. This same substance in ointment may be rubbed upon the skin to kill any wandering marauders that may be found there. The patient should be freely scrubbed with soap and water, and afterwards the irritable or inflamed skin may be treated as if for eczema. Bed clothing should also be disinfected. In broken-down subjects tonics and cod-liver oil are indicated.

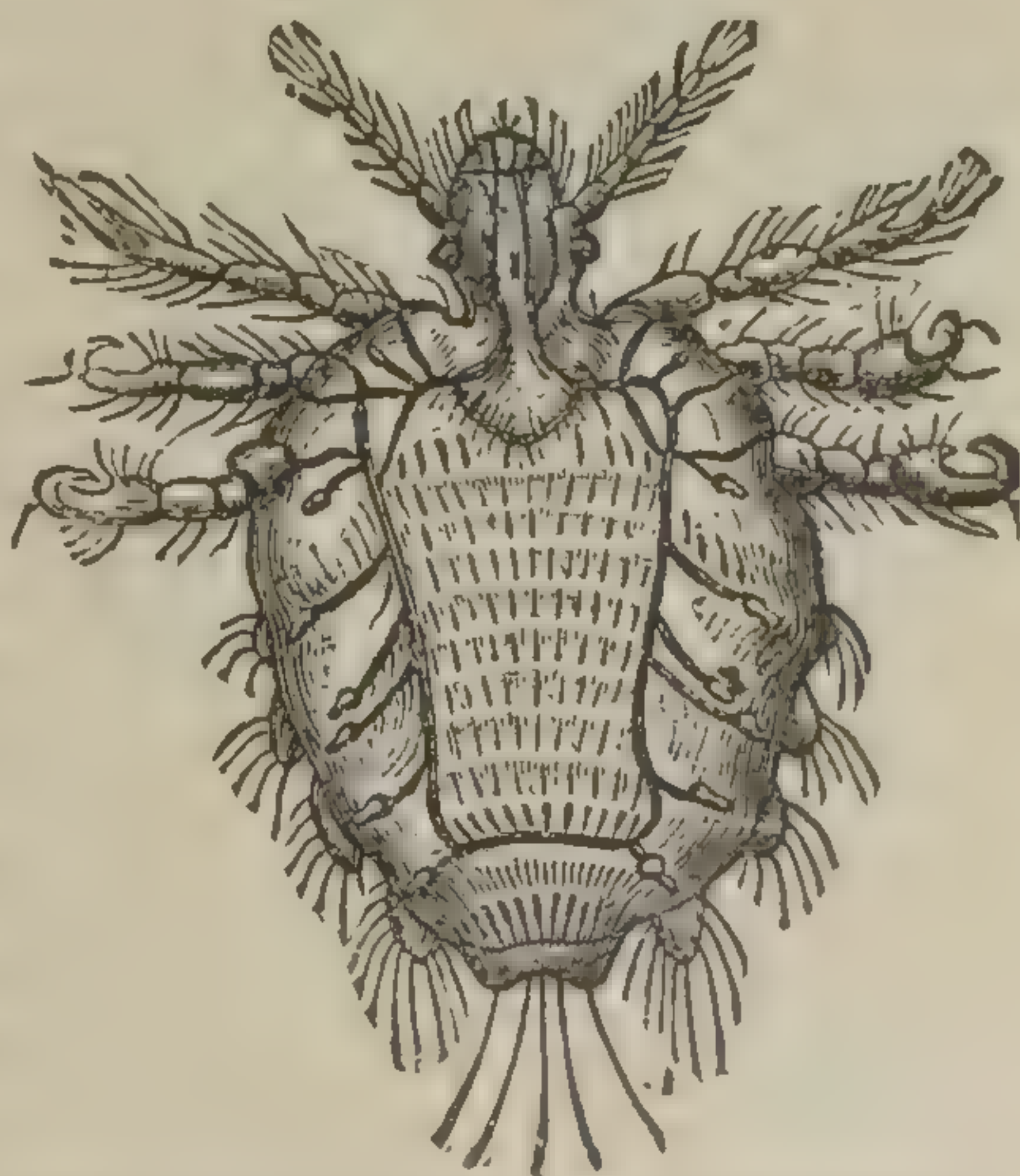
### Pediculosis Pubis.

The pubic louse so-called does not invade the head, but is mostly found in the pubic region, as well sometimes on other parts, namely the axillæ, the hairy thorax and even the eyebrows and eyelashes.

The lice may be seen as little grayish specks attached to the hairs near the skin. They attack adults usually, and are most frequently conveyed in sexual intercourse, but by no means always. The irritation caused by the presence of the crab louse is not so violent as with the other varieties, but the itching leads to scratching, and in this way papular and other eczematous lesions are produced. Crab lice often produce

a peculiar steel gray pigmentation (*maculæ cœrulæ*) upon the skin of the size of the finger nail or somewhat less, and situated on the inside of the thighs, pubes, abdomen and axillæ. The color is thought to be derived from a

FIG. 42.



*Pediculus pubis* (After Schmarda).



pigment in the salivary glands of the insect. These spots do not fade upon pressure, but disappear when the pediculi have been destroyed. The classical treatment consists in the free inunction of the blue ointment, but a ten per cent. oleate of mercury is more cleanly and much less irritating. Kaposi's petroleum salve—five parts of petroleum, two and a-half parts of olive oil, and one part of balsam of Peru—is both elegant and efficacious. After the remedies have been applied several times a bath may be taken. It is best not to clip or shave the hairs.

### FILARIA MEDINENSIS.

The guinea worm is a white worm one-tenth of an inch in diameter and from two to three feet long. It is met with only in tropical countries. It is now held that the parasite enters the body by the larvæ being swallowed, and not, as was formerly supposed, by the creature boring its way into the tissues from without. The mischief-maker is the female worm, the male never having been discovered. The usual site of attack is the skin about the ankles, but it is also met with on the leg and thighs, scrotum, conjunctivæ, under the tongue, etc. Usually one worm only is present, but sometimes two, or even many more. According to Geber, when the worm has developed to maturity it tries to make its way into the outer world, and at a circumscribed spot, where for some time has existed an uneasy sensation, the skin will begin to show some signs of irritation. Presently slight fluctuation can be determined. Sometimes violent reaction results, causing phlegmon or even gangrene. When rupture occurs, the head of the worm will protrude, and its gradual extraction is attempted by winding it around a stick, an inch or more daily, taking especial pains not to break the body of the parasite during the process. This method is tedious, and has been advised against by Manson, who, with Emily, recommends injecting into the worm as it lies under the skin a one to one thousand solution of bichloride of mercury. Christie suggests the electrolytic



destruction of the worm. Tincture of asafœtida in one- or two-drachm doses, three times a day, has been recommended in addition.

### CYSTICERCUS CELLULOSÆ CUTIS.

The cysticercus of the *tænia solium* is occasionally found in the subcutaneous tissue, where it forms tumors from a pea to a marble in size, round, and covered by unaltered skin. In the early stages the tumors are tense and elastic, but in time may undergo calcareous change. Usually several tumors are found, more commonly on the back.

Ecchinococcus cysts have also been found in the skin, where they form fluctuating tumors.

Quite a large number of insects, such as the flea, the mosquito, the tick, bedbug, wasp, bee, etc., attack the human skin and set up more or less dermatitis accompanied by burning, stinging and itching.

The treatment of the inflammation which results from the bites and stings of insects consists in the first place in the removal of the cause, and, secondly, in allaying the burning and itching. For this latter purpose cooling and antipruritic lotions are serviceable, such as cologne, vinegar, weak carbolic acid lotions, and especially menthol in combination with the calamine and zinc lotion. A pigment of salicylic acid one part and flexible collodion, nineteen parts, is a valuable application for the stings of various insects.

Rixford and Gilchrist<sup>1</sup> have published an elaborate report of two cases of Protozoan Infection of the Skin and other Organs, of which the following account is a very brief summary:

The first patient, a man aged forty, suffered from a chronic eruption of the skin, which clinically and histo-

<sup>1</sup> Johns Hopkins Hosp. Rep., Vol. I., 1896.



logically was strongly suggestive of cutaneous tuberculosis. Although proving very destructive the process remained local for many years, and the man's health was good; finally, however, nine years from the beginning of the disease, the contiguous lymphatics became involved and the infection was generalized. Tubercle bacilli were not discovered, but large numbers of protozoa were present in all the lesions. In the second case, a man aged thirty-five, the affection was more acute, the lymphatic glands becoming involved in two months from the first appearance of the eruption, the patient dying some weeks afterwards. Protozoa were found in large numbers.



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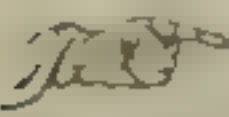
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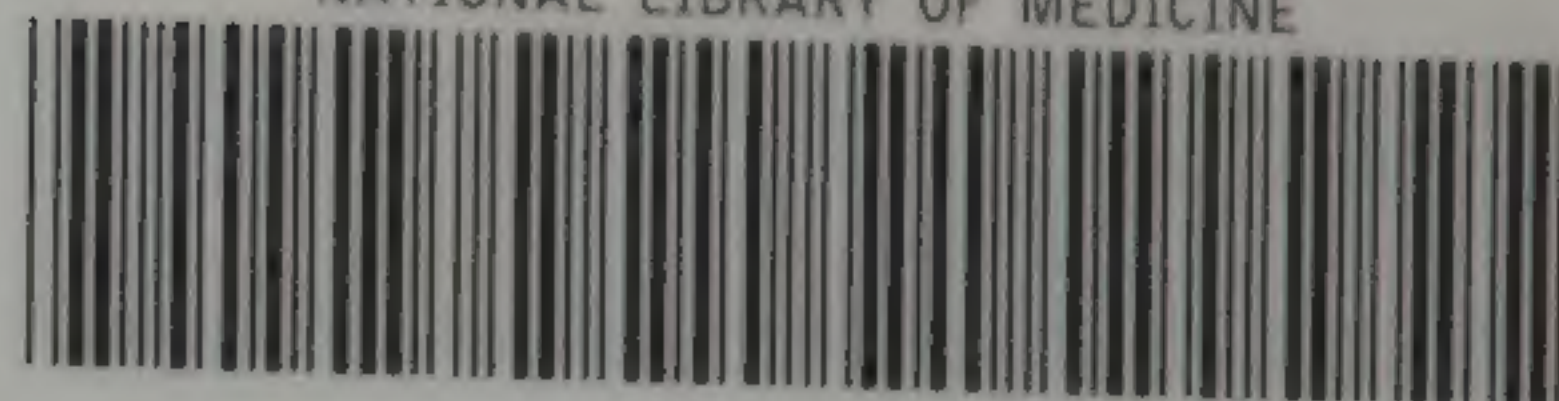




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